

**IRAN AND PROLIFERATION: IS THE U.S. DOING  
ENOUGH? THE ARMING OF IRAN: WHO IS  
RESPONSIBLE?**

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**HEARINGS**  
BEFORE THE  
SUBCOMMITTEE ON NEAR EASTERN AND  
SOUTH ASIAN AFFAIRS  
OF THE  
COMMITTEE ON FOREIGN RELATIONS  
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## **IRAN AND PROLIFERATION: IS THE U.S. DOING ENOUGH?**

**THURSDAY, APRIL 24, 1997**

U.S. SENATE,  
SUBCOMMITTEE ON NEAR EASTERN AND,  
SOUTH ASIAN AFFAIRS,  
OF THE COMMITTEE ON FOREIGN RELATIONS,  
*Washington, DC.*

The subcommittee met, pursuant to notice, at 2:05 p.m. In room SD-419, Dirksen Senate Office Building, Hon. Sam Brownback (chairman of the subcommittee) presiding.

Present: Senators Brownback, Smith, and Robb.

### **OPENING STATEMENT OF HON. SAM BROWNBAC, U.S. SENATOR FROM KANSAS**

Senator BROWNBAC. We will call the committee hearing to order. Thank you all for joining us today on a hearing in the Foreign Relations Committee Subcommittee on Near Eastern and South Asian Affairs, a hearing on Iran and Proliferation: Is the U.S. Doing Enough? We certainly appreciate all the people in attendance and we have got an excellent set of witnesses and some tough questions to ask about U.S. policy toward the Iranians.

Washington is a town where people can and will disagree on just about anything. It is therefore my great pleasure to hold a hearing on a topic about which there is little disagreement. In the years since the Islamic revolution, Iran has developed into a militant nation intent on exporting its particular brand of Islam and using terror both internally and externally to achieve its aims. It is a rogue state, seemingly unsusceptible to reason, uninterested in international norms, and committed to the development of weapons of mass destruction.

In the 19 years since the revolution, notwithstanding the blandishments of its most important trading partners in Europe, Iran has not lessened its support for international terrorism. The German courts recently confirmed as much, branding Iran's top leadership with responsibility for the gangland-style slaying of four Kurdish dissidents living in Berlin.

The executive branch and the Congress, Republicans and Democrats, we all agree that Iran represents a significant threat to the American people, to our friends, and to our interests in the Middle East and the world over. Yet, despite broad agreement, our various policy prescriptions do not seem to be working. The European policy of critical engagement has proven ineffective and misguided.

But our policy is not being implemented as well as it should be, either.

President Clinton has stated on a number of occasions that the proliferation of weapons of mass destruction poses an extraordinary danger to the United States. Clearly, the Congress agrees and has helped put in place a set of laws aimed at stemming the proliferation of weapons of mass destruction to rogue states such as Iran. Yet only twice in recent memory, twice, has any president invoked those laws to sanction nations that sell missiles and nuclear weapons technology to Iran, and neither sanctions case involved either Russia or China, the two main proliferators to Iran.

I have in front of me a list of transfers to Iran of everything from conventional cruise missiles to chemical precursors to full-blown nuclear reactors. Obviously, there is a substantial amount of classified material on these subjects, but many of the details are available in the open press, and it is upon open sources only that we have relied in preparing for today's discussion.

I will cite only a few of these cases in the interest of time.

Case No. 1: China, a signatory to the Chemical Weapons Convention, reportedly sold chemical precursors, chemical production equipment, and production technology to Iran. In a hearing on Chinese proliferation just last week, the administration admitted these were destined to Iran's chemical weapons program.

It would be natural to conclude that such transfers were a violation of Executive Order 12938, the Chemical and Biological Weapons Control and Warfare Elimination Act, or the Iran-Iraq Nonproliferation Act. Yet none of the applicable sanctions have been imposed.

Case No. 2: Russia is allegedly assisting Iran's missile program and has supplied technology and parts of the SS-4 missile system. The SS-4 has a range of 1250 miles and can be loaded with a nuclear warhead. If this report is true, it would be a violation of provisions of the Arms Export Control Act, the Iran-Iraq Nonproliferation Act, as well as the Foreign Assistance Act.

Case No. 3: In mid-1995 reports surfaced about the transfer by China of sophisticated missile guidance equipment to Iran. It was later reported that there was unanimous agreement among experts who had seen the evidence that the transfer constituted a violation of the Missile Technology Control Regime.

In the unclassified material, I can see the United States demarched China on this issue and that U.S. officials traveling to China discussed it. All of the reading I have done on the subject, however, suggests no decision on sanctions was ever made. If not, why not?

Case No. 4: In January and March 1996, both Vice Admiral John Redd, Commander of the Fifth Fleet, and General Peay, Commander of Central Command, told reporters that China had supplied Iran with C-802 anti-ship cruise missiles against which the U.S. Navy has no defense, and which clearly endangered the men and women serving in the Gulf.

The sale of these missiles is clearly de-stabilizing, to use the language of the Iran-Iraq Nonproliferation Act. The administration appears to have concluded, however, that the known transfers are not

of a de-stabilizing nature. That is certainly poor comfort and support for our sailors in the Gulf.

Case No. 5: In 1995 Russia and Iran signed a contract for the Russian Ministry of Atomic Energy to complete work on an unfinished nuclear reactor in Iran. I understand that there are ongoing discussions between Tehran and Moscow for three more reactors. The administration has clearly stated its opposition and asked the Russians to call off the deal. The Russians, however, have indicated they will proceed.

Is this a sanctionable act? The transfer of reactors by itself is not, because the Nonproliferation Treaty allows such transfers to take place. But given that the administration has told us again and again that Iran is aiming for a nuclear weapon and that they are afraid that technology transfers associated with the reactors will speed up Iran's quest for nuclear weapons, there seem to be several laws that apply, including the Nuclear Proliferation Prevention Act, the Export-Import Bank Act, and others. The administration apparently has chosen not to impose sanctions.

Now, I have mentioned only five cases, but there are many more, involving not only non-conventional weapons, but conventional ones as well. While China is Iran's No. 1 supplier of unconventional arms, Russia, according to the Department of State, will be Iran's No. 1 supplier of conventional arms, and will reportedly sell \$1 billion worth of arms to Iran in 1997 and 1998.

It was just last Friday that President Yeltsin stated that Russia has "good positive cooperation with Iran, which shows a tendency to grow."

If it is indeed one of this administration's top priorities to isolate Iran and to strangle Iran's ability to earn foreign exchange that buys these weapons of mass destruction, why are we not doing more about the suppliers? How, in the face of almost overwhelming evidence, can the administration have stated in a recent hearing that China and the United States "recognize a shared interest in preventing the proliferation of weapons of mass destruction and related technologies"?

Now, I recognize that the use of sanctions is not always as effective as engagement. But where do we draw the line? The German government last week recalled its Ambassador to Iran after the verdicts in the trial. The judge in the case stated clearly that Iran's leadership was behind the plot and that it was Germany's policy of engagement with the regime that led Tehran to feel it could act with impunity on German soil.

Do we not at a certain point recognize what was recently brought home so clearly to the German government, that Iran and those who supply Iran with weapons of mass destruction believe that because we have been so appeasing that they can continue on with their programs with impunity?

What will happen when inevitably some companies violate the terms of the Iran and Libya Sanctions Act? In front of me I have several articles describing the French firm Total's intent to invest in Iranian oil fields to the tune of \$850 million. The Malaysian firm Petronas will be making a similar investment, and what are we going to do? Will this administration, for good reasons or bad,

fudge on imposing sanctions because they do not want to get into a tiff with France or Malaysia?

Congress has passed a good deal of legislation to counter the dangers of terrorist states like Iran getting nuclear, chemical, and biological weapons and the means to deliver them. The President has signed that legislation into law. Yet those laws are for the most part lying around gathering dust.

I have got charts of both of those that we have up to my right, to your left, about applicable laws that exist and the sanctions that have been imposed, about weapons sales to Iran, the countries of China and Russia involved with those. I have to my left and to your right just a list of the headlines that have taken place in recent newspaper articles about all of this occurring. And if that is not enough, then we have the Wednesday, April 16th edition of the *Washington Times*, headlined "Russia Sells Missiles to Iran, Terrorists to Get Latest Arms."

Is it just that sanctions are not useful? After all, that is a valid answer, though not one I would agree with. Are the laws not clear enough or not written tightly enough? Is there a reason that the administration uses the loopholes that exist?

Take the recent case of Moscow's agreement to provide Iran with nuclear reactors. Congress made clear its view that the sale was not compatible with a continued U.S. assistance program. The President disagreed and waived sanctions associated with the reactor deal.

I am certain there are Members of Congress who are asking themselves whether we should have given the President the loophole he used. For my part, I believe that selling reactors to Iran and receiving aid from the United States are mutually exclusive. After all, why should Russia spend U.S. tax dollars to support our avowed enemy?

The administration has told us again and again that Iran is a threat, that we must contain that threat and stem Iran's quest for a nuclear weapon. What are we waiting for? Is it not time to ask ourselves whether our policy is really working?

That is what I look forward to exploring in this hearing with the various witnesses that will be present to testify. I think we have to have and need to have a good discussion, a frank discussion, of what we are doing to contain Iran from getting weapons of mass destruction. We will pursue that in depth in this hearing.

I would like to turn to my colleague, Mr. Smith from Oregon, if he would have an opening statement. The mike is yours.

#### **STATEMENT OF HON. GORDON H. SMITH, U.S. SENATOR FROM OREGON**

Senator SMITH. Thank you, Senator. I am pleased to be here with you and congratulate you on your first hearing of this subcommittee. I am honored to be a member of it. I welcome Senator D'Amato and am anxious to hear his testimony. I know I share the concern he has about the prospective sales of new NATO members to Iran and the impact that may have on Israel and other neighbors.

So I look forward to these and am glad to be here.

Senator BROWNBACK. Thank you, Senator Smith. We will have others joining us.

I would call first to the witness stand Senator Alfonse D'Amato from New York. I am well aware that we could sit here and threaten Iran, decry their weapons program, sanction their suppliers, and the Iranians would pay us little heed. That was why we needed my esteemed colleague from New York to join us today. Now at least we can be sure that President Rafsanjani will sit up and take notice.

Senator D'Amato deserves kudos and gratitude from the American people. At a time when the administration was uninterested in confronting the growing problem in Iran and was unwilling to prevent even U.S. companies from investing in Iran, Senator D'Amato was out there calling for an investment ban and sanctions. The Iran-Libya Sanctions Act which he authored is a blow to Iran's source of foreign exchange and a much needed wakeup call to the regime.

The United States cannot sit back and permit one of the world's most dangerous regimes to operate with impunity.

So therefore I welcome my esteemed colleague here today. I congratulate you on the work that you have already done in this area, and I look forward to your testimony of what else we need to do to make sure to get this threat to our security and our interests under control. Senator D'Amato.

**STATEMENT OF HON. ALFONSE M. D'AMATO, U.S. SENATOR  
FROM NEW YORK**

Senator D'AMATO. Mr. Chairman, thank you for the graciousness of your introduction, and I am very pleased to be here with you and Senator Smith and Senator Robb.

Mr. Chairman, at the outset let me thank you for calling these hearings. I think it is very important to focus on exactly what has taken place, because little is really known about the circumstances and how the legislation, which basically says that we cannot nor should we do business with those countries who permit unrestricted trade, and particularly in the oil and gas production, of Iran and Libya as if all is well.

The fact of the matter is that Iran is conducting a naval buildup in the Persian Gulf. It is building and buying Chinese-made C-802 cruise missiles, a danger to our Navy, and our people are very, very concerned in that area. They are building weapons of mass destruction, chemical weapons, as the chairman has alluded. It is because of this and those things, Iran's continued sponsorship of terrorism, that the legislation, the Iran-Libyan Sanctions Act of 1996, was passed overwhelmingly and enacted into law.

Now, Mr. Chairman, let me divert from the very carefully prepared remarks of my staff—and it is a great staff and they have me engaged in all these nuances which very few people understand—and get right to the issue. You know, you cannot say to a rogue nation that, you are outside of the scope of dealing with us and we are not going to do business as usual and make international credits available to you and have you continue to use these great resources that we, directly and/or indirectly through our allies, help to finance. And I am talking about the oil and gas resources that both Libya and Iran have.



That is why we passed the Iran-Libyan sanctions act. Make no mistake about it; that bill was destined to die in the House of Representatives. It was going to die because of the interest of the corporate structure, not only here in America but throughout the world—business, business. People are willing to do business with just about anything to make money—greed.

We have seen it in the past. We have seen people do business with the most despicable characters in the world. With the Swiss bankers, they were not neutral; they were the Nazis' bankers during World War Two. Little has really changed.

Multinational corporations in the countries where the various corporations operate, and particularly their own national companies, seem to forget the lessons of the past and so they deal with these petty tyrants and dictators and those people who export revolution even in those countries themselves.

We just recently had the case that the chairman alluded to, in which the German court found four Iranian-Kurds who were killed by the Iranians on orders of—and the court said specifically—from the highest levels of the Iranian Government. These executions took place on German soil, in Berlin. This is the verdict of the German court.

I have to tell you, we would never have passed that bill were it not for a terrible tragedy, the crash of TWA 800. It was at that point in time when the bill had passed the Senate and was being held in the House and being worked over, worked over, being worked down, watered down, so that there would really be nothing left of it.

That is just the same kind of policy that we had with Iran and Libya for years, where we said we are not going to permit their oil to come into this country, but we let our foreign subsidiaries bring it in through the back door. Finally the President put a stop to that. I proposed legislation to do it. He did it by executive order. Fine, we did it.

But how do we sound to our allies when we say one thing and do another? Are we really serious? What does that mean to the people who we are attempting to get to act as responsible citizens in the world, in the world community, and to stop exporting to Iran and Libya?

Well, I have to tell you something. I think the American people expect more of us, and I think this is more important than that. I think that the recent killings demonstrate what is taking place and how bold the Iranians are in exporting their revolution even to the territories of those countries who have been very sympathetic to them regarding trade.

Now let me tell you, there are some people who say, this act is not worth anything, it is just divisive. Well, they are wrong. Just look at this past January when Mohsen Yahyavi, a senior Iranian Parliamentarian, was quoted as saying that this act is having a very profound and detrimental impact, and he says "there is little or no foreign investment in the Iranian petroleum industry." We want them to get that message. But if you continue to do business with the killers and those people who promote this kind of activity, well, why should they stop?

We are not suggesting that we go in and bomb them. We are suggesting that we withhold the money from them with which they pay for their aggression and terrorism.

Now, with respect to the oil-producing rogue states like Iran and Libya, the sanctions policy should be viewed in terms of U.S. national security. Any increase in Iranian and Libyan petroleum revenues should be viewed as a threat to the national security and foreign policy interests of the United States.

I hope that our allies begin to understand this. But they are not going to understand unless we show some determination. U.S. sanctions against Iran and Libya are part of an ongoing effort by our country and by Congress to fill the gaps in U.S. policy. Congress through its law-making powers has passed legislation against investment in Iran and Libya and sanctions against countries that deal with Cuba, otherwise known as the Helms-Burton Act.

It is this prerogative of Congress to do so—and I think we have to remember that, despite a reluctance to deal with the issue, eventually the President did in fact sign both measures.

I think we have to also remember that that law is really only as good as its enforcement. Now, fortunately the administration has reached an agreement with the European Union regarding the implementation of the Helms-Burton Act and the Iranian-Libyan Sanctions Act. This agreement was accomplished due to the diligent work of Ambassador Stuart Eizenstadt, the Under Secretary of Commerce for International Trade. His commitment to easing relations between the U.S. and the European Union is unending, and it is important. We want to keep our allies with us. And his work on this issue as well as the question of the Holocaust victims' assets in Swiss banks has been untiring and vital.

The agreement as it relates to the Iranian-Libyan Sanctions Act is quite clear. It states:

The United States will continue to work with the European Union toward objectives of meeting the terms: One, granting EU member states a waiver under section 4 of the act with regard to Iran; and two, for granting companies with the EU waivers under section 9[c] of the act with regard to Libya.

Now, I think it should be clear that the terms in the law for granting a waiver specifically with regard to Iran are very simple. If the country where the company to be sanctioned is situated imposes substantial measures, including the imposition of economic sanctions—in other words, our allies have to join with us—then and only then can a waiver be granted.

Any suggestion that the European Union should be granted a blanket waiver without following the stipulations of the bill, that is to join in this boycott, is simply mistaken. There is no blanket waiver here.

In passing the legislation, Congress intended for this law to be implemented in full, and if blanket waivers are provided without just cause only Iran will benefit, and they will laugh at us and they will continue their policy. So it comes down to a question of how far our nation will go in implementing its tools to defend itself, and I think using the great economic power that we do have and hopefully to get our allies to work with us is the proper way.

Now, there are some people what are talking about the principles of dual containment and they argue that isolating Iran will only

radicalize the regime. They argue that through the policy of dialog we can moderate the behavior of this rogue regime. Yet despite all of its criticisms of our efforts, our allies, with all of their moderate talk, with doing business with them, with supplying them credits, have not been able to moderate their policy. It is a flawed policy.

I think we had better learn the lessons of the past, and as recently as the incident that took place in Germany. I think we have to remember that terrorists are against all of the principles that we stand for, and that if we, because of economic expedience, look the other way so that we can continue business and rack up profits, in the long run this policy will become self-defeating.

Our allies can join with us and hopefully work with us and become part of the solution in moving Iran into a civilized nation that respects the rights of its neighbors.

I thank the chair.

[The prepared statement of Senator D'Amato follows:]

#### PREPARED STATEMENT OF SENATOR ALFONSE D'AMATO

I would like to thank Chairman Brownback for inviting me to speak here today about Iran before the Subcommittee.

The United States has chosen to attempt to deny the two foremost sponsors of international terrorism the hard currency to fund their support of terrorism and their attempts to obtain weapons of mass destruction.

Iran is conducting a naval buildup in the Persian Gulf, buying Chinese-made C-802 cruise missiles, which pose a direct threat to our ships in the Gulf and this worries me. It is because of this and because of Iran's continued sponsorship of terrorism that I introduced and passed the Iran-Libya Sanctions Act of 1996.

I am pleased to say the Act is working. Even a senior member of the Iranian Parliament was quoted in January as saying the sanctions are working. There is little or no foreign investment in the Iranian petroleum industry.

Last week's conviction in Germany of four Iranian agents for the killing of four Iranian Kurdish dissidents in Berlin in 1992, and the courts' determination that the top Iranian leadership ordered the assassination, European nations are hardly in a position to suggest that the United States is being too harsh on Iran. The fact that Iranian sponsored terrorism is being conducted on European soil should make the Europeans rethink their opposition to economic sanctions on Iran.

With respect to oil-producing, rogue states like Iran and Libya, U.S. sanctions policy should be viewed in terms of U.S. national security. Any increase in Iranian and Libyan petroleum revenues should be viewed as a threat to the national security and foreign policy interests of the United States.

Our allies are providing Iran and Libya with the hard currency enabling them to fund their aggression and are contributing to the menace of terrorism. Through continued trade, extension of credits, loan rescheduling at concessionary rates, and a stubborn adherence to the misguided principle of "critical dialogue," Iran has been enriched by our allies who are themselves targets of Iranian terrorism.

Iran's aggression and support of terrorism is never really considered by our allies when they engage in business deals with them. For our part, we have chosen not to do business with these terrorist states. We wish that our allies would do the same.

Unfortunately, in Europe, many politicians do not view the matter this way. Many Europeans have suggested that the Iran-Libya Sanctions Act was a political ploy, or a result of the recent American election campaign. Nothing can be further from the truth. U.S. sanctions against Iran and Libya are part of an ongoing effort by the United States Congress to fill gaps in U.S. policy. Congress, through its law-making powers, has passed legislation against investment in Iran and Libya and sanctions against countries that deal with Cuba, otherwise known as Helms-Burton. It is the prerogative of Congress to do so, and we must remember, that despite a reluctance to deal with the issue, the President did in fact sign both measures. We must also remember that a law is really only as good as its enforcement.

Fortunately, the Administration has reached an agreement with the European Union regarding the implementation of the Helms-Burton Act and the Iran-Libya Sanctions Act. This agreement was accomplished due to the diligent work of Ambassador Stuart Eizenstat, Undersecretary of Commerce for International Trade, who

negotiated this agreement. His commitment to easing relations between the U.S. and the EU is unending. His work on the issue of Holocaust victims assets in Swiss banks has also played a vital role in settling that problem. I am honored to work with him on both counts.

The agreement, as it relates to the Iran-Libya Sanctions Act, is quite clear. It states,

The U.S. will continue to work with the EU toward the objectives of meeting the terms 1) for granting EU Member States a waiver under Section 4.C of the Act with regard to Iran, and 2) for granting companies from the EU waivers under Section 9-C of the Act with regard to Libya.

It should be clear that the terms in the law for granting a waiver, specifically with regard to Iran are very simple. If the country where the company to be sanctioned is situated, imposes substantial measures, including the imposition of economic sanctions, then a waiver can be granted. Any suggestion that the European Union should be granted a blanket waiver without following the stipulations of the Iran-Libya Sanctions Act is a mistake. In passing the legislation Congress intended for this law to be implemented in full. If blanket waivers are provided without just cause then only Iran will benefit.

It comes down to the question of how far a nation will go and what tools it will use to defend itself. The United States as well as its allies today face a new kind of war. This is not the kind of war that comes with declarations of war by one nation upon another, but a covert, cowardly attack on the institutions that we all once thought were immune from attack.

Twenty years ago, no one rightly thought that someone would try to blow up the World Trade Center, or blow up airliners full of innocent men, women, and children. Attacks today are indiscriminate and devoid of purpose. Even these acts are not without supporters and we know who provides aid to these faceless terrorists. We know who trains them, we know who supplies them, and we know who pays them.

Supporters of the principle of "dual containment" argue that isolating Iran will only radicalize the regime. They argue that through the policy of dialogue we can moderate the behavior of this rogue regime. Yet, despite all of its criticism of our efforts, our allies have thus far been unable to offer an example in which Iran's support of terrorism has been lessened through talking to them.

We must remember that the terrorists are against all that we stand for. No one is immune from attack, no one is safe. If our allies wish to deal with the devil, then so be it. Our allies can either be part of the problem, or part of the solution.

Senator BROWNBACK. Thank you very much, Senator D'Amato. We appreciate that statement.

Let me ask you. I outlined five cases where weapons have been or precursor chemicals or ingredients to missile guidance systems have found their way to Iran from China and Russia and some other places as well and yet nothing has happened. The sanctions have not been imposed. What has been our failing to date? Why are these items still finding their way to a nation who is clearly considered a rogue regime and who is exporting, officially exporting terrorism, even as is found by outside courts? Why is that continuing to occur?

Senator D'AMATO. Mr. Chairman, I think it is because we have not pursued, not only this administration but past administrations, a policy which says that you cannot say one thing and then do another. You cannot say that you want to normalize your relations with us and work with us as a nation, whether it be China, whether it be Russia, and then undertake the very activities that undermine this principle by supplying various munitions and chemical weapons precursor materials that are necessary to Iran, that will be used in a manner—and they know it; the Russians know it, the Chinese government knows it—in a manner to destabilize and create tremendous problems throughout the world.

Now, how do you approach this? Do you approach it by making public ultimatums? I do not think so. I think that would be a mistake, and I do not suggest that. But by gosh, behind the scenes

when we are dealing with the Chinese and where they are racking up \$47 to \$50 billion a year surpluses in trading with us, we have the economic leverage to say to their leadership—and I hope it has been done. Maybe the Vice President did it. I do not know. But I think at the very highest levels they have to be told: You cannot trade with us and work with us, as we would like to build a relationship of mutual respect, and then because you are going to receive a half a billion dollars in hard currency sell weapons technology to Iran; and if you do that you will be jeopardizing the mutuality of interests in terms of commerce, in terms of mutual respect, because you are imperiling our safety. You would not expect us to supply your enemies with materials that would be dangerous and threatening to you and to your people. We expect the same.

It never happens. And what happens when we talk about doing something and using our vast power? My gosh, every single business group comes running in: Oh no, you will cost the American consumer money. Incredible, myopic.

We have not done this for years. And indeed, not only do these groups come in and lobby, they lobby and just do business as if every—just do business with them and they are going to be nice and they are going to respect you. The fact that they are selling, again, a half a billion dollars here and a half a billion dollars there to the rogue nations of the kinds of materials that will cause death and destruction and destabilize this world, we just simply forget. It is on the altar of economic greed.

Some of our own corporate boardrooms, the most wonderful, outstanding citizens of America who make all kinds of contributions—very little with their own money, generally from their own corporations—to every kind of wonderful event there is, they are the very people coming in and talking about, oh, we are worried about the consumer.

Hell they are. They are just worried about their own profits. I think that is a heck of a thing. But that is democracy. You and I and the others have an obligation of standing up and going beyond that, and sometimes it means some of the interests that are in our own States and people that we know who have businesses, good and decent people, and get blinded because they want that business, they want those cheap goods that come in because they are selling them at great markups and they are making lots of money.

You think they are really worried about the American consumer? That is a lot of nonsense.

Senator BROWNBACK. We treat it as too much of a secondary issue?

Senator D'AMATO. Oh, yes, totally. In other words, this is: So what? So they are selling a half a billion dollars a year of chemical weapons and/or missile systems or nuclear technology and, you know, we do not want to rock the boat.

I have heard about what a great basket of opportunity it is and we should not do anything to imperil those trade relations. I have had friends come to me, tell me that: Do not rock the boat.

Well, I think there comes a point in time when behind the scenes we have to say to them: Let me tell you, if you make these sales, if your generals who are running some of these plants both in Russia and in China are going to conduct this kind of surreptitious

sale, some of it not so surreptitious, to these various countries, then you are going to imperil our normal relationship and we are going to stop the business intercourse between the two that normally flows.

I do not think that that is threatening. That is just setting the record straight. That is protecting U.S. and world interests for our security. It seems to me that makes sense.

Senator BROWNBACK. I want to welcome to the committee Senator Robb, who is the ranking on this committee, has a vast amount of experience in the foreign relations field, one that I am delighted to serve with you on this committee, am looking forward to working with you, and I look forward to turning the mike over to Senator Robb.

**STATEMENT OF HON. CHARLES S. ROBB, U.S. SENATOR FROM VIRGINIA**

Senator ROBB. Thank you, Mr. Chairman.

I thank our colleague from New York for joining us today. He has never been one to hold back when he has some thoughts that are relevant to a particular question, and certainly this is one he has been very passionate about. There were several comments that he made today that could lead to an interesting followup, but I think, rather than keep our colleague here, knowing that he has other business—indeed, I have two other committees that are meeting as we meet here at the moment—I will defer those questions until the matter comes up on the floor of the Senate, where we may have opportunity to debate this or other policy, and I want to hear from both the administration panel and the other panel that follows. But I join you in thanking our colleague for sharing his views with us on this important topic today.

Senator D'AMATO. Thank you, Senator Robb.

Thank you, Mr. Chairman.

Senator BROWNBACK. Thank you very much, Senator D'Amato.

Our second panel will be Mr. David Welch, Acting Assistant Secretary of State for Near Eastern Affairs, and Mr. Robert J. Einhorn, Deputy Assistant Secretary of State for Proliferation from the administration.

We are looking forward to a good dialog presentation. I think there have been a number of points made. I hope the two panelists, if at all possible, can address some of those points that are made, some of the questions that have been out there. I think it would be most—certainly to me most illuminating if you can address those items, because these are matters that come up frequently.

We do have your written testimony. We can take that into the record. You can summarize it if you would like. I would hope you could address some of these cases that have come up.

I know you both have a very difficult job, as Senator D'Amato was just pointing out about the difficulties that consecutive administrations have faced since 1979 dealing with Iran. This has not been an easy issue.

I think also you know how strongly Congress has felt about this and the number of laws that we have passed and how frustrated we are that we do not seem to be making better progress.

So Mr. Welch, the microphone is yours. We welcome you to this committee hearing. Thank you for coming.

**STATEMENT OF DAVID WELCH, ACTING ASSISTANT  
SECRETARY OF STATE FOR NEAR EASTERN AFFAIRS**

Mr. WELCH. Thank you, Mr. Chairman. I am pleased to be one of your first witnesses in this new capacity for you. It is a rookie event for me, too, in front of the Senate Foreign Relations Committee, and I am glad you picked such an easy topic for us to work on today.

If I might, I would like to take a few minutes to talk in a general way about our policy. I am going to take advantage of this opportunity because it is our first session together and I think, when seen in the context of our overall effort, you will discern a common purpose in what we are doing with respect to Iran and with some of the ideas and efforts made by Senator D'Amato.

Iran in our view poses a significant threat in a region where we have vital national interests. Its policies have not changed for the better over the last 4 years. It still seeks to project its regional influence through a conventional military buildup and through the development of weapons of mass destruction and their means of delivery.

We are particularly concerned by Iran's continued pursuit of nuclear technologies, chemical and biological weapons components, and production materials and missile technology. Iran's acquisition of ever more sophisticated missile technology from North Korea and China presents an increasing threat to our friends and to our own military presence in the Gulf.

Let me say, though, that Iran's threat is not limited to the military arena. It seeks to expand its influence by promoting violence around the world. It has used terror to disrupt the Middle East peace process and against its own people. Iran seeks to gain influence through disaffected elements in neighboring countries and by promoting subversion of neighboring governments.

It has supported terrorist activity in places as far away as South America to the Far East. Its use of terror recognizes neither allies nor frontiers, age nor sex, religion nor ethnicity.

Not even Iran's own people are protected from its violence. Its human rights record is among the worst in the world. Iran's ethnic and religious minorities and women regularly feel the lash of Iran's repressive system. Its disrespect for the right of free expression is vividly demonstrated by the regime's continuing public offer of money for the murder of another country's citizen, Salman Rushdie, because of what he wrote.

Others who dare stand for freedom of ideas, like Iranian writer Faraj Sarkuhi, also suffer for their courage. Iranian oppositionists face less public but equally dire threats. 1 week ago, as you know, a German court found that the assassination of four Iranians of Kurdish extraction at the Mykonos restaurant in Berlin was ordered by the highest levels of the Iranian government. These murders are part of a broad pattern of state murder that has claimed the lives of 50 Iranian dissidents since 1990. What more tangible evidence could I offer of Iran's willingness to use terror and violence in pursuit of state goals?

As you know, we are also investigating an incident at the Al-Khobar apartment complex in Saudi Arabia. We have not reached any conclusions on that investigation. If the evidence were to demonstrate involvement by Iran or, for that matter, any other state, we will take appropriate action to ensure that justice prevails.

What is the goal of U.S. policy on Iran? We seek to change Iranian behavior through economic and political pressure, while directly limiting Iranian capabilities. In the interim, we want to constrain the resources Iran has to pursue activities that threaten us and our allies. We seek neither to permanently isolate Iran nor to overthrow the Iranian regime. We do not object to Islamic government. We want Iran to abandon those policies that have made it an international pariah.

Our approach includes nonproliferation and counterterrorism efforts combined with economic and political pressure. To combat global terrorism, we are developing a common agenda with our European allies based on P-8 counterterrorism measures.

On nonproliferation, current legislation enables the U.S. to pursue our objectives toward Iran. International cooperation curtails, but has not eliminated, Iran's access to the technology and equipment of proliferation concern. Current sanctions covering the proliferation of nuclear, chemical, and biological weapons, missile equipment technology, advanced conventional weapons, and lethal military assistance to terrorist list countries allow us to punish those who ignore this international consensus. Nonetheless, some governments do indeed continue to assist Iran with its weapons of mass destruction and missile program.

That is why we have combined our nonproliferation efforts with economic and political pressure. We want to demonstrate to Iran that its policies will not only fail, but will bring a significant cost to Iran's economic and political interests and to the wellbeing of its own people.

Targeting weaknesses in Iran's economy, particularly its need for technology and foreign capital, our unilateral efforts have limited Iran's policy options. For example, as Senator D'Amato noted, Iran has had difficulty attracting foreign investment into its oil industry because of the threat of U.S. sanctions. Iran must therefore choose, in effect, between development of its resources and funding the very policies to which we object. Similarly, our success in limiting Iran's international influence and activity contrasts starkly with its desire to be a regional power.

I have outlined to you our response to the threat posed by Iran. Now I would like to discuss how I believe we could be more effective. Our current legislative tools reach the limits of effective unilateral initiatives. We would be much more successful if we had a cooperative effort beyond counterterrorism and nonproliferation with our allies to use common political and economic clout to have a real impact on Iran.

We have pressed our allies to adopt such an approach and to restrict Iran's access to foreign capital and technology. We seek a coordinated multilateral response that imposes clear consequences on Iran for its choices. What would that common approach look like? Steps taken on April 10 by the European Union, including the recall of Ambassadors, suspension of the so-called critical dialog, ex-



pulsion of certain Iranian intelligence operatives, these are solid initial steps, Senator.

A common strategy that brings us closer together with Europe would obviously have a greater impact. It would make clear to Iran that support for terrorist groups is unacceptable, period. We must be perfectly clear on that point: No support for terrorism for any reason, at any time, in any place.

We must take an equally firm stand on proliferation of weapons of mass destruction. While the world community is working to reduce and eliminate these weapons, we cannot remain silent while Iran develops its own capabilities.

The Europeans have said that they will meet April 29 to consider additional measures. We hope that the European Union's decision will move our approaches closer together by including measures that pose a tangible cost to Iran.

We want to create an impetus for Iran to change. What do I mean by meaningful change? Not dialog for its own sake. Efforts to engage Iran have not achieved any notable successes. Has dialog stopped assassinations? No. Has dialog ended Iranian-supported terrorism? No. Has dialog stopped Iran's use of its embassies to coordinate arms procurement and terrorist action? No. Has dialog even succeeded in limiting the threat against Salman Rushdie? No. Current approaches have not conferred immunity from terrorism nor caused Iran to change.

Iran's revolution continues to evolve. Periodically there are internal voices that are raised which criticize the regime's policies, internal and external, that put at risk Iran's own development and stability. Unfortunately, those voices are not being given a serious opportunity for expression in next month's Presidential election in Iran. The candidates in that election share a common investment in the status quo and Iran's unacceptable policies.

As long as Iran continues to seek to project Iranian power, violence, and terror in a way that threatens our interests in international stability, we will work to isolate Iran and to limit that threat. We will use all the tools at our disposal to protect our friends and our interests, responding as we need to to Iranian actions.

We call on our allies to join us in applying a real cost to Iran. We hope that U.S. leadership and the growing realization of European nations that Iran's behavior is unacceptable will provide us an opportunity to work more closely together. We are confident, however, that Iran will not prevail and that the Iranian people will in their own interests eventually compel their revolution to evolve and yield a regime that respects international standards of behavior in the interest of all Iranians and their government.

My colleague Bob Einhorn, who represents our Bureau of Political-Military Affairs and is one of the State Department's pre-eminent experts on nonproliferation issues, has some comments about how the nonproliferation concerns apply in the case of Iran.

Senator BROWNBACK. Thank you very much, Mr. Welch, for your testimony. I look forward to some discussion of our statements and some questions that I have.

Mr. Einhorn, welcome to the committee. I noted your testimony last week, I believe in front of the Government Affairs Subcommit-

tee, on this same topic. We look forward to your discussion here today.

**STATEMENT OF ROBERT J. EINHORN, DEPUTY ASSISTANT  
SECRETARY OF STATE FOR POLITICAL-MILITARY AFFAIRS**

Mr. EINHORN. Thank you very much, Mr. Chairman, and thank you for the opportunity to testify before your subcommittee.

Despite its avowed support for nonproliferation and disarmament, Iran is actually seeking the full range of weapons of mass destruction, missile delivery systems, as well as advanced conventional weapons. It has a clandestine nuclear weapons development program that has sought to procure facilities and technologies that have no plausible justification in Iran's declared nuclear energy plans. Its chemical warfare program is among the largest in the developing world, producing some 1,000 tons of CW agent per year. It has placed a high priority on acquiring biological weapons and is capable of producing many different kinds of BW agent. It has imported Scud missiles as well as components and technology that would help them produce longer range missiles indigenously, and it is buying conventional arms to give it the means to intimidate its neighbors and threaten commercial and military navigation in the Gulf.

Impeding Iran's acquisition of these capabilities has been one of the Clinton Administration's highest priorities. We have waged a vigorous campaign both bilaterally and multilaterally to sensitize supplier governments to the growing threat and to persuade them to adopt effective measures to ensure that neither they nor exporters operating under their jurisdiction will assist Iran's programs.

In the nuclear area, we have successfully urged all but a very few suppliers not to engage in any nuclear cooperation with Iran. At the highest levels we have pressed Russia to join this near-consensus. While Russia continues to pursue construction of the Bushehr nuclear power reactor, it has agreed to limit significantly the scope of its nuclear cooperation with Iran and in particular will not meet Iran's request for a gas centrifuge enrichment plant or a plutonium-producing heavy water research reactor. Nonetheless, we continue to urge Russia to forego all nuclear cooperation with Iran.

We urge the same of China. So far China has suspended its sale of two power reactors to Iran, probably because of siting and financing difficulties. Whatever the reason, it is a positive step, and we will continue to call on Chinese leaders to curtail nuclear cooperation with Iran.

Multilaterally, the Nuclear Suppliers Group, at U.S. initiative, put in place in 1992 a regime to control nuclear-related dual-use exports, a regime which has substantially increased the obstacles to Iran acquiring the equipment and technology it seeks. Also, learning from the Iraq experience, the IAEA, the International Atomic Energy Agency based in Vienna, next month is expected to adopt more rigorous safeguarding procedures aimed at detecting undeclared nuclear activities.

Cumulatively, we believe the steps we have taken are real impediments to Iran's nuclear weapons aspirations. They have signifi-

cantly slowed the Iranian program and posed obstacles to its ultimate success.

In the chemical area, the U.S.-supported tightening of the Australia Group's controls over chemical-related exports has largely closed off European chemical and equipment companies as a source of supply and forced Iran to look elsewhere, particularly to China. The Chemical Weapons Convention will also play a major role. It will outlaw any assistance to Iran's CW program. If Iran joins the CWC, it will be subject to challenge inspections. If it does not join, it will be subject to sanctions and political isolation.

We are deeply concerned that various Chinese entities have transferred dual-use chemicals, production equipment, and production technology to Iran, which we expect will use them for its CW program. We have urged Chinese leaders to take strong steps to prevent these entities from assisting Iran's program and to strengthen China's still inadequate export control system. We have also told them that we are actively examining the transactions of which we are aware, to determine whether they meet the requirements of our sanctions law.

In the missile area, our continuing efforts to strengthen the Missile Technology Control Regime have effectively denied Iran's access to most of the world's leading producers of missile technology. We are extremely concerned, however, by North Korea's supply of Scud missiles and Scud-related technology to Iran, as well as by reports of missile-related cooperation between Iran and Russian and Chinese entities. We will be meeting bilaterally with North Koreans next month to discuss their missile exports and will continue to press with Russia and China at the highest levels to avoid any contribution to Iran's long-range ground to ground missile program.

We are also disturbed by Iran's efforts to buildup its conventional force capabilities. We have persuaded the other 32 members of the Wassenaar Arrangement to join us in agreeing not to transfer armaments to Iran and other countries of concern. In connection with Wassenaar, President Yeltsin publicly pledged in 1994 that Russia would not enter into new arms contracts with Iran and that it would also close out existing contracts within a few years.

Any transfers to Iran of advanced anti-aircraft missile systems, such as those in the S-300 series, would violate Russia's commitments. We have raised the issue of reported transfers of such missiles with the most senior officials of the Russian Government and have received firm assurances that such transfers would not occur. Indeed, we have not determined that any such transfers have taken place. But we will monitor this issue very carefully.

We have also expressed strong concerns to Chinese leaders about the transfer to Iran of C-802 anti-ship cruise missiles. These missiles add to Iran's maritime advantage over other Gulf states, put commercial shipping at risk, and pose a direct threat to U.S. forces. We do not believe the C-802 transfers to date meet the standards for imposing sanctions under our law, but we are continuing to monitor this situation as well for any additional transfers that might cross the threshold of sanctionable activity.

Mr. Chairman, we have used a wide range of policy tools to promote our goal of impeding Iran's acquisition of weapons of mass destruction and other dangerous capabilities. Among those tools are

multilateral export control regimes like the Nuclear Suppliers Group, international agreements like the Chemical Weapons Convention, and active bilateral diplomacy. Another tool we have used is U.S. nonproliferation sanctions laws. We have sanctioned Iran twice for missile-related imports and imposed sanctions on entities providing assistance to Iran's CW program.

The threat or imposition of sanctions can under certain circumstances be an effective complement to other nonproliferation policies, but they are not a substitute. Indeed, with all the laws currently on the books, we believe we have reached the limits of effective unilateral initiatives in this regard.

What is most needed is close cooperation among the world's leading suppliers of sensitive goods and technologies and other interested states. Fortunately, we have already managed to build wide international support for the need to constrain Iran's programs. Even in the cases where we have some differences, such as with China and Russia, we believe there is fundamental agreement on the need to prevent Iran from further development of weapons of mass destruction.

We need to continue building on this foundation.

Thank you, Mr. Chairman.

[The prepared statement of Mr. Welch and Mr. Einhorn follows:]

#### PREPARED STATEMENT OF DAVID WELCH AND ROBERT EINHORN

Mr. Chairman, and Members of the Subcommittee, I would like to thank you for the opportunity to testify before you today on an issue of vital national interest, U.S. policy on Iran. I want to review with you Iran's pattern of unacceptable behavior, our response to that behavior, our work to bring our friends and allies into closer harmony with that response, and some prospects for the future.

Iran poses a significant threat in a region where we have vital national interests. Its policies have not changed for the better over the last four years. The Iranian regime still seeks to project its regional influence through a conventional military build-up and through the development of weapons of mass destruction and their means of delivery. We are particularly concerned by Iran's continued pursuit of nuclear technologies, chemical and biological weapons components and production materials and missile technology. Iran's acquisition of ever more sophisticated missile technology from North Korea and China presents an increasing threat to our friends and our military presence in the Gulf.

Iran's threat is not limited to the military arena. Iran seeks to expand its influence by promoting violence around the world. Iran has used terror to disrupt the Middle East Peace Process. Iran seeks to gain influence through disaffected elements in neighboring countries and by promoting subversion of neighboring governments. It has supported terrorist activity from South America to the Far East. Iran's use of terror recognizes neither allies nor frontiers, age nor sex, religion nor ethnicity.

Not even Iran's own people are protected from its violence. Iran's human rights record is among the worst in the world. Iran's ethnic and religious minorities and women regularly feel the lash of Iran's repressive system. Its disrespect for the right to free expression is vividly demonstrated by the regime's public offer of money for the murder of another country's citizen, Salman Rushdie, because of what he wrote. Others who dare stand for freedom of ideas, like Iranian writer Faraj Sarkuhi, also suffer for their courage.

Iranian oppositionists face less public, but equally dire threats. One week ago, a German court found that the assassination of four Iranian Kurds at the Mykonos restaurant in Berlin was ordered by the highest levels of the Iranian government. These murders were part of a broad pattern of state murder that has claimed the lives of some 50 Iranian dissidents since 1990. What more tangible proof could I offer of Iran's willingness to use terror and violence in pursuit of state goals?

Meanwhile, the Al-Khobar investigation continues; we have not yet reached any conclusions. If the evidence demonstrates involvement by Iran or any other state, we will take appropriate action to ensure that justice prevails.

What is the goal of U.S. policy on Iran? We seek to change Iranian behavior through economic and political pressure while directly limiting Iranian capabilities. In the interim, we seek to constrain the resources Iran has to pursue activities that threaten us and our allies. We seek neither to permanently isolate Iran, nor to overthrow the Iranian regime. We do not object to Islamic government. We want Iran to abandon those policies which have made it an international pariah. To achieve that, we are, and always have been, willing to have a dialogue with an authorized representative of the Iranian government.

Our approach includes counter terrorism and non-proliferation efforts combined with economic and political pressure. To combat global terrorism, we are developing a common agenda with our European allies based on the P-8 counter-terrorism measures.

In the non-proliferation arena, Iran has demonstrated a determined effort to develop and acquire weapons of mass destruction (WMD), ballistic missiles capable of delivering them and dangerous advanced conventional weapons. In the nuclear arena, Iran has dedicated civilian and military organizations that are acquiring nuclear facilities and technologies that are inconsistent with a purely peaceful nuclear program. Iran's chemical warfare program is among the largest in the Third World, producing some 1,000 tons of CW agent per year, on top of already existing stockpiles of CW agents. In the missile area, Iran has a vigorous program to acquire completed ballistic missile systems as well as the goods and technology that would allow Tehran to develop an indigenous missile production capability.

Clearly, Iran poses one of the greatest proliferation threats. The U.S. has pursued a vigorous international campaign to prevent the transfer to Iran of facilities and technologies that could further that country's efforts to develop WMD and their means of delivery as well as advanced conventional weapons. Preventing such development remains one of our top foreign policy priorities. We have worked closely with other governments to sensitize them to the scope of the problem and we have often cooperated with supplier governments to ensure that exporters operating within their borders do not unwittingly cooperate with Iran's WMD and missile programs.

The U.S. has been active in all the multilateral nonproliferation regimes to make other states aware of the nature of Iran's procurement practices as well as to strengthen international export controls. A number of changes have been made in the way these regimes operate as a result. The Nuclear Suppliers Group (NSG), for example, has adopted a "Non-proliferation Principle" calling on suppliers to authorize transfers of nuclear components and technology "only when they are satisfied that the transfers would not contribute to the proliferation of nuclear weapons or other nuclear explosive devices." In other words, suppliers have agreed to exercise caution in considering transfers to states such as Iran even though they are parties to the NPT with full-scope IAEA safeguards. The U.S. has similarly worked within the Australia Group and the Missile Technology Control Regime and we are actively opposing efforts by Iran to delegitimize Australia Group export controls.

The U.S. has addressed the issue of conventional transfers to Iran primarily in the context of the Wassenaar Arrangement where thirty-three countries, including Russia, have agreed not to transfer conventional armaments and sensitive dual-use technologies to countries whose behavior is a cause for serious concern. Iran is one such country. Further to Russia's participation in Wassenaar, President Yeltsin publicly pledged in 1994 that Russia would not enter into new arms contracts with Iran and would close out existing contracts within a few years. The details of that commitment were finalized in 1995 during meetings between Vice President Gore and Prime Minister Chernomyrdin.

Any transfers to Iran of advanced anti-aircraft missile systems such as those in the S-300 series, as has been reported in the press, would provide Iran with new dangerous capabilities and would violate the 1995 agreement. We have raised the subject of reported transfers of missiles from Russia to Iran at the highest levels of the Russian government and have received firm assurances that such transfers would not occur. We continue to monitor this closely.

We remain concerned by the transfer from China to Iran of C-802 anti-ship cruise missiles. Such missiles, whether installed on land or on patrol boats, will add to the maritime advantage that Iran already enjoys over other Gulf states and will put commercial shipping in the Gulf at risk. Especially troubling is that these cruise missiles pose new, direct threats to deployed U.S. forces. We have concluded that the C-802 transfers that have occurred so far do not meet the standards defined in the Iran-Iraq Arms Non-proliferation Act and have not, therefore, imposed sanctions on China because of the sale. Nonetheless, we are very concerned about these transfers, and will continue to monitor Chinese and Iranian activity for any additional transfers that might cross the threshold of sanctionable activity.

The U.S. is working to strengthen other global agreements as well. For instance, we have worked closely with the IAEA in developing the so-called 93+2 enhanced safeguards program which will give the IAEA an increased ability to detect undeclared nuclear activities. We expect the IAEA Board of Governors to approve that program in May. The Chemical Weapons Convention will provide important new tools to impede Iran's CW activities. It will outlaw any assistance to anyone's CW program and either subject Iran to challenge inspections if it joins the CWC or subject it to sanctions and political isolation if it does not. On the Biological Weapons Convention, the U.S. is working with other states on a protocol that will provide transparency and build confidence in the BWC's provisions.

In the bilateral context, we approached a number of supplier governments when we had information to suggest that companies that operate within their borders might be exporting technologies, equipment or materials that would contribute to Iran's WMD and missile programs. We have been particularly active in the nuclear area. We have found most supplier governments to be responsive to our approaches and our actions have prevented the transfer of a number of items to Iran that we believed were to be used in WMD and missile development. Most have adopted policies of not cooperating with Iran's WMD and missile programs. Most have also opted not to pursue any peaceful nuclear cooperation with Iran, with Russia and China being notable exceptions, because of the risk that such cooperation would be misused to advance Iran's nuclear weapons program.

The U.S. has pursued a senior level dialogue with Russian and Chinese leaders on this issue. Vice President Gore and Russian Prime Minister Chernomyrdin have discussed in detail on a number of occasions Russia's planned nuclear cooperation with Iran. Presidents Clinton and Yeltsin have also dealt with the issue on several occasions, most recently at the Helsinki Summit. While Russia continues to pursue construction of the Bushehr nuclear power reactor, Russian officials have agreed to limit the scope of nuclear cooperation with Iran. We will, however, continue to make clear to Russian officials our opposition to any nuclear cooperation with Iran.

The U.S. has also engaged in a dialogue with Chinese leaders both at the senior political and experts level and urged them to curtail nuclear cooperation with Iran. While there continue to be differences between our governments on the issue of nuclear cooperation with Iran, we can point to some successes such as China's decision to terminate negotiation for the supply to Iran of two power reactors, probably for siting and financing reasons. Whatever the reason, we consider this to be a positive step. China is currently seeking to put in place a national nuclear export control regime that will allow China to have the necessary political review of sensitive nuclear-related exports to countries of concern. We have pressed Chinese officials to put in place this revamped regime as quickly as possible.

On missile-related exports, we have, over the years, worked successfully to bring Russia into the MTCR. We are, of course, concerned by reports of Russia-Iran missile cooperation. We have pursued this issue at the highest levels of the Russian government and will continue to do so. Similarly, we have frequently raised with Chinese officials information we have received about missile-related cooperation by Chinese entities with Iran and urged Beijing to take effective steps to avoid any Chinese contribution to Iran's missile programs.

Because of Iran's determined effort to develop WMD and their means of delivery and their continuing support for terrorism, we have combined non-proliferation and anti-terrorism efforts with economic and political pressure. We seek to demonstrate to Iran that its policies will not only fail but will bring a significant cost to Iran's economic and political interests and to the well-being of its people. Targeting weaknesses in Iran's economy, particularly its need for technology and foreign capital, our unilateral efforts have limited Iran's policy options. For example, Iran has had difficulty attracting foreign investment into its oil industry in part due to the threat of U.S. sanctions, enacted by Congress last year in the Iran and Libya Sanctions Act. Iran must, therefore, choose between development and funding the very policies to which we object. Similarly, our success in limiting Iran's international influence and activity contrasts starkly with its desire to be a leading regional power.

I've outlined for you our response to the threat posed by Iran. Now, I'd like to discuss how we could be more effective. Our current tools—economic sanctions such as the Iran and Libya Sanctions Act and the President's embargo, the missile and CBW sanctions laws, the Iran-Iraq Nonproliferation Act, the sanctions for lethal military assistance to terrorist-list countries and the many nuclear sanctions laws—reach the limits of effective unilateral initiatives. The U.S. has already imposed sanctions on Iran for transfers in the WMD and missile areas. We sanctioned Iran for missile-related transfers from North Korea and we have imposed sanctions on entities providing assistance to its CW program. The fact that very few supplier governments cooperate with Iran's WMD and missile programs is testament to the

strength of our efforts and to the fact that most governments have developed a common policy on the need to prevent the further development of these programs. Even in cases where we have some differences, such as with China and Russia, we believe there is fundamental agreement on the need to prevent Iran from further WMD development.

We would be much more successful if we had a cooperative effort, beyond counter-terrorism and non-proliferation, with our allies to use our common political and economic clout to have a real tangible impact on Iran. We have pressed our allies to adopt such an approach and to restrict Iran's access to foreign capital and technology. We seek a coordinated, multilateral response that imposes clear consequences on Iran for its choices.

What would a successful common approach look like? The steps taken on April 10, the recall of EU ambassadors, suspension of the Critical Dialogue, expulsion of certain Iranian intelligence operatives, are solid initial steps. A common strategy that brings us closer together would have a greater impact. It would make clear to Iran that support for terrorist groups is unacceptable, period. We must be perfectly clear on that point. No support for terrorism for any reason, at any time, in any country. We must take an equally firm stand on proliferation of weapons of mass destruction. While the world community is working to reduce and eliminate these horrible weapons, we can not remain silent while Iran develops its capabilities.

The Europeans have said they will meet April 29 to consider additional measures. We hope that the EU's decision will move our approach closer together by including measures that pose a tangible cost on Iran. We want to create an impetus for Iran to change.

What do I mean by meaningful change? I don't mean dialogue for its own sake. Efforts to engage Iran have not achieved any notable successes. Has dialogue stopped assassinations in Europe? No. Has dialogue ended Iranian supported terrorism? No. Has dialogue stopped Iran's use of its embassies to coordinate arms procurement and terrorist action? No. Has dialogue even succeeded in lifting the threat against Salman Rushdie? Again, no. Simple engagement has not conferred immunity from terrorism, nor caused Iran to change.

Iran's revolution continues to evolve. Periodically, internal voices are raised to criticize the regime's internal and external policies that put at risk Iran's own development and stability. Unfortunately, those voices are not being given a serious opportunity for expression in next month's presidential election. The candidates in that election share a common investment in the status quo and its unacceptable policies.

As long as Tehran continues to seek to project Iranian power, violence and terror in a way that threatens our interests and international stability, the U.S. will work to isolate Iran and limit that threat. We will use all of the tools at our disposal to protect our friends and our interests, responding forcefully to Iranian actions.

We call on our allies to join us in applying a real cost to Iran for its policies. We hope that U.S. leadership and the growing realization of European nations that Iran's murderous behavior is unacceptable will provide an opportunity for us to work more closely together. We are confident that Iran will not prevail and that the Iranian people will, in their own interests, force their revolution to evolve and yield a regime that respects international standards of behavior in the interests of all Iranians and their regime.

Senator BROWNBACK. Thank you, Mr. Einhorn. We appreciate your testimony.

Senator Robb, if you would not mind, I thought what we could do is 7 minutes each and we will bounce back and forth on that until either you are exhausted or it is time to move on.

We have got a series of questions, if I could, Mr. Welch. So if we can get the time clock and make sure of the timing.

Mr. Welch, as you look around the world would you say that Iran as a nation is our No. 1 security threat presently to this Nation and to our interests, or is there another country that you would deem more of a present security threat than the Iranians are?

Mr. WELCH. I would not want too many more to join those ranks, but I would see Iran as a substantial security threat to the United States, given the interests that we have in the immediate neighborhood of Iran, in the Gulf in particular, but also given the fervor by

which they pursue their own perceived national interests, which takes them further afield than the Gulf, both practically and politically.

To use a political example as well as a practical one, consider their position on the peace process. The leadership of Iran has in effect targeted the peace process both in political terms by its own actions in denouncing almost anything positive that goes on and supporting almost anything negative that goes on, and by practical steps, by its allegiance and support of, allegiance with and support of groups that themselves conduct actions of violence and terror against those involved in the peace process.

So while I do have responsibility for a couple of other places that fall into the category of rogue states, Iran is certainly one that we regard as a very, very important national security threat and a serious long-term one as well. I think that is a judgment that many of our allies in the region and outside it share.

Senator BROWNBACK. So you are saying it may not be the only one, but it is certainly in the class A category as far as our most difficult security threats we presently have around the entire world?

Mr. WELCH. Graduated from class A to the pro leagues, yes.

Senator BROWNBACK. I would judge that as well, it seems to me. So what is so troubling to me, as I raised a number of examples—and even you can go to this Wednesday's *Washington Times*, as I did: "Russia sells missiles to Iran." If they are in the pro leagues for our difficult security interests that we have, why are we not taking even further steps to try to limit them, whether it is in the specifics of the missile sale or, if you can enlighten me that these are not actually occurring, we have additional sanctions that you do have available to use? Why are we not stepping it up?

Mr. WELCH. Senator, let me take a stab at this and then ask Bob to comment about the specifics raised by, among other things, that newspaper article.

First, we agree this ought to be a priority foreign policy concern of the United States. We think that in very real terms this administration and those that preceded it have demonstrated that Iran is a very fundamental concern of ours. We have in unilateral sanctions and in unilateral policy probably the most robust and vigorous effort against Iran's behavior of any nation in the world.

We are also seeking to expand that in both the nonproliferation and other areas, by reaching greater areas of common agreement with our allies that will enable us to target those behaviors that are specifically of concern to us. We have in some cases chosen to extend our unilateral reach. The Iran-Libya Sanctions Act is an excellent example of that. The administration worked very closely with the House and Senate in order to forge a consensus behind this measure. It is a powerful deterrent to foreign investment in Iran's oil and gas sector. That in turn denies Iran the ability to get resources that it can use for some of the things that we find problematic.

While it is a new piece of legislation, I think Senator D'Amato is absolutely right in saying that it seems to be working, that those who are attracted to the idea of investment in Iran's petroleum sector are having second thoughts about doing that as a result.



We need to go beyond that. We would like further economic and political steps by our friends.

Senator BROWNBACK. Let us talk about ones that we can do. I do not mean to interrupt, but I want to get to this point if I could. We have aid that we give to Russia. They are providing nuclear reactors into that region. According to this and other articles, they are selling missiles into that region. We could step up pressure on those suppliers of these sort of weaponry, whether conventional or unconventional, to the Iranians. And we are not.

Mr. EINHORN. Mr. Chairman, could I comment on that?

Senator BROWNBACK. Please, because I want to get on that point toward the suppliers, because we have done a lot toward Iran itself, but we are not getting at the people getting the items into Iran.

Mr. EINHORN. First of all, you cited the newspaper story. As I mentioned in my statement, we have not concluded that any of these transactions have taken place, these transfers of advanced missiles have taken place. But we need to watch that very carefully.

But on your general point, the suggestion you make I think is that because we have not invoked sanctions in all of these cases or even in many of these cases we are not pursuing conscientiously and vigorously a nonproliferation policy. In my view the premise of that question puts too much reliance, expects too much of our sanctions laws. Our sanctions laws have a variety of very specific requirements that have to be met in order for sanctions to be triggered. They are very technical and they are very detailed.

One, for example, in the chemical weapons sanctions law is that the exporting entity needs to know, to be conscious that its export is going to a chemical weapons program. Now, what happens is that a lot of these chemical weapon aspiring states use front companies and intermediaries, and it may be very difficult for us to know whether the exporter in fact was knowledgeable about the destination. So we have to look at that very carefully, examine it very carefully.

So the requirements of the sanctions law may not be triggered even when we know that a worrisome transaction has taken place.

Now, that does not mean we do not take action. Because we are aware of such transactions and their destabilizing impact, we will take very vigorous action, and we have even without invoking sanctions. So sanctions are not synonymous with an effective nonproliferation policy.

In terms of, you mentioned the Russia-Iran transfer of a power reactor. This has been one of our highest priorities since 1993. This has been dealt with by President Clinton with President Yeltsin, Vice President Gore with Prime Minister Chernomyrdin. It is a constant topic in our discussions, and we have put a lot of pressure on Russia.

As a result, Russia has constrained significantly the scope of that transaction and it has canceled the transfer of some very sensitive technologies, like a gas centrifuge enrichment plant. It has cut it way back, and it is because of the effort that we have put into this.

I can go down the list, but we are concerned about these transfers and we put a lot of effort into persuading suppliers not to make them.

Senator BROWNBACK. I appreciate that, but I could also go down the list of items that have made their way into Iran and have, so that this has not worked today.

Senator Robb, and I look forward to some additional questions.

Senator ROBB. Thank you, Mr. Chairman. You made reference to an article today in the *Washington Times*. I am going to start with a reference to one that appeared in the *Washington Post* by Jim Hoagland, who frequently writes on issues of this sort, and it is a particularly provocative piece, entitled "Iran, Murder by Proxy," in today's *Washington Post* that I am sure both of you have seen.

I take advantage of this opportunity because, particularly looking directly behind Mr. Welch, I see a former DCI and, since I serve also on the Intelligence and Armed Services Committees, I do not have to even take a chance on referring to any matters that would not be appropriate. Some of the questions, frankly, that I would like to ask would be more appropriate for closed sessions. But a couple have come to mind immediately.

If, as Mr. Hoagland writes in this morning's *Washington Post*, there are, quoting him, "emerging indications" that Iran was behind the Khobar Towers bombing, and if this characterization is correct, murder by proxy or something along those lines—and I would say, having just returned from the region and met with a number of officials—I will not be more specific because I do not know how specific they wanted to be with some of their comments, but certainly, the comments that I received in the country where it happened in particular were not inconsistent with some of the things in this particular article—the question I have for you is: Are retaliatory military strikes against terrorist targets inside Iran appropriate, using as the premise the article that appeared in today's *Washington Post*?

Mr. WELCH. Senator, on this one I am going to have to apologize. I am in a different position in answering your question than you are in asking it.

Senator ROBB. I understand the difference. And I am not asking you, incidentally, for targeting lists or intentions. I am simply asking a broader question, about whether or not that is an—an—appropriate response if the predicate is satisfied.

Mr. WELCH. Setting aside for a moment the predicate, and my answer will have no reference to that, in general were we confronted with a situation of this sort, where an action has been taken against Americans, official or unofficial, we have a range of options to respond. We take a look at all those things in such circumstances. None are discarded *a priori* or accepted *a priori*. We do not rule anything in or anything out. That is our general response.

With respect specifically to the incident in question, I am obliged to say, as I did in my prepared testimony, knowing that this question might come up, that this is a matter that is still under investigation. We have not reached any conclusions yet. But when we do we will take an appropriate action.

Senator ROBB. Again without committing you to a particular response, and given the fact that there is still some uncertainty, at least in terms of the official position of the United States with respect to the cause or the perpetrators of this particular action, the question I would ask you has to do with what you think the reaction of such an action on the part of the United States might be within the Arab world.

Mr. WELCH. I think that is a difficult hypothetical question to answer, Senator. A lot depends on what provoked our response, the nature of our response.

Senator ROBB. Well, again I am using the provocation as some clear finding that indeed this was, using the author's terminology, "murder by proxy" that was carried out by the Iranian government.

Mr. WELCH. You are asking me a question that, because it is hypothetical and on a sensitive subject, I am simply not prepared to go into in open session. I would like to be able to talk to you about that and we have other ways we can do that.

Senator ROBB. Let me just ask another question. I realize these are sensitive and I have got others that I was thinking about asking that I have decided not to, so you can imagine what I am not going to put to you at this point.

I will ask another question, though, that probably falls in the same general category, and I cannot help but noting editorially a smile on the face of the former DCI, that he is glad that you are in the seat this time and he is not with respect to any official response.

In that same article, reference is made to the possibility of an idea that has been circulating in some circles about extending the naval blockade that is now in force against Iraq to cover Iran as well. The question: Is that logical? Is it feasible in your judgment?

Mr. WELCH. Again, setting aside that this is a matter that remains under investigation, to answer the kinds of hypothetical questions that you are asking, I am simply not comfortable doing that in public, in an open session.

We have a variety of tools that we can use in these situations. We are not ruling any of them in, any of them out.

Senator ROBB. Let me move to a different area then that might be easier to deal with. Moscow pledged during past meetings of the Gore-Chernomyrdin Commission that it would cease further arms sales to Iran after current contracts were fulfilled in 1999. Mr. Einhorn, I believe you made reference to the fact that Russia has transferred SS-4 missile technology to Iran.

My question is, if that is the case, would not that be a violation of the U.S.-Soviet INF Treaty and the MTCR which Moscow has agreed to abide by?

Mr. EINHORN. Senator Robb, I alluded to the reports that we have both seen about possible cooperation on the SS-4-related technology. I cannot comment on that. This is difficult in open session, but we are concerned about the point.

Senator ROBB. The only question I said is if. If that is true, would not that be a violation? I am not asking you whether it is true, but I am just asking for an interpretation of the agreements.

Mr. EINHORN. The MTCR—Russia's MTCR obligations would prohibit—Russia's MTCR's obligations would indicate that they

have to exert extreme caution in dealing with items that are on the MTCR list. SS-4 components would be on the MTCR list. Whether they would be so-called Category I or Category II items, you would have to know what items you are talking about.

In the case of Category I items or Category I technology, MTCR says there would be a presumption to deny such exports. So it is very difficult to talk about this in the abstract. It depends. You need to know what kind of technology, what kind of items may have been transferred. But as I say, we are concerned about these reports, and the reports apply not just to SS-4-related technology, but other kinds of missile equipment and technology, and we are examining them and we are approaching Russia leaders at the highest levels.

Obviously, if such reports were to be true there would be very real concern, because they would add to Iran's ability to produce long-range ground to ground missiles indigenously. So we are following this very carefully.

Senator ROBB. Mr. Chairman, my time is expired. I thank both of our witnesses for their circumspect and diplomatic responses.

Senator BROWNBACK. I have a few more questions, and if you have some we will try that as well.

Mr. Einhorn, I want to be very specific on one question. If C-802 transfers do not meet the standards defined in the Iran-Iraq Proliferation Act, Nonproliferation Act, would you support an amendment to that Act that would change the standard for imposition of those sanctions?

Mr. EINHORN. Mr. Chairman, I am not suggesting any change in the law. I am just saying that the standard for sanction ability at this time has not been met in our view. The standard is destabilizing numbers and types, does the transfer so far constitute a destabilizing number and type? And we say so far no, but we will monitor the situation for any additional transfers that would cross that threshold of sanction ability.

Senator BROWNBACK. So you do not think those transfers, the C-802 transfers, meet that standard yet of destabilizing?

Mr. EINHORN. The administration does not believe transfers to date meet that standard. More importantly, the Department of Defense in analyzing this very carefully—and of course, DOD has a tremendous stake in this—has concluded that so far these are not sanctionable transfers.

Senator BROWNBACK. Mr. Welch, you mentioned that—I gather in your testimony you are saying that we have reached the limits of what we can do unilaterally and we need to go multilateral. I have some question of, if that is indeed the premise which you operate under, you do have additional grounds that you could cover unilaterally, that we can take against particular supplier nations. We have identified a number of those that are up on these boards.

If you dispute that, I would certainly want to know how or where, or how we might change the law to give you more tools. But taking your premise that we need to go more multilateral at this point in time, are you committed, is the administration committed, to doing something with the EU before April 29th when they meet on this issue to prod and to push them as aggressively and as hard

as possible to tighten their sanctions in working with us against the Iranians?

Mr. WELCH. The simple answer is yes. We want to work with our allies on this. We think we have a moment of opportunity, given the Mykonos verdict. We believe that their steps so far have been good ones. We would like to do more. We will have those discussions with them.

In fact, Senator, they have been under way, both before and in the immediate aftermath of the verdict, and there will be more. We have a variety of ways we do that. And let me add that it is done at a variety of levels, too, up to and including the senior leadership of this administration.

Senator BROWNBACK. Mr. Welch, if I understand your testimony correctly, you would agree with me that we have not been effective in limiting the Iranians' ability to get either precursor chemicals, items that could lead toward a nuclear weapons development program, that we have not been effective to date in getting their access? Maybe, Mr. Einhorn, you are the correct person to answer that.

Mr. EINHORN. Thank you, Mr. Chairman. No, I would not agree with that. I would state that we have been quite effective in limiting Iranian access to sources of supply. In the chemical area, I pointed out the Australia Group, that is a multilateral export group, has tightened its controls. And we see it, that Iran has shifted its procurement efforts away from Europe because of the effectiveness of these controls. It now is relying primarily on cooperation with Chinese entities as a source of foreign supply.

Senator BROWNBACK. So are they getting the items?

Mr. EINHORN. Well, yes, we do see transactions in dual-use chemicals, production equipment, production technology. We see this happening. Now we are working very hard with the Chinese, trying to persuade them to take very seriously the Chemical Weapons Convention obligation they are about to assume and to clamp down, to develop good export controls, and to prevent Chinese entities from engaging in this kind of cooperation.

Senator BROWNBACK. So the products remain getting into Iranian hands?

Mr. EINHORN. Yes, for the time being they are getting into Iranian hands. And similarly in the nuclear area. The United States has launched a major diplomatic campaign to get nuclear suppliers not to engage in nuclear cooperation with Iran. We have gotten near-unanimous support for that campaign. So now you have essentially two nuclear suppliers, Russia and China, still engaged in nuclear cooperation with Iran. But even those two we have persuaded to constrain that cooperation, and we will continue to work on that in the hope that they will agree to terminate that cooperation.

Senator BROWNBACK. Is it not time to take action against those two suppliers, whatever force and effect the United States has, economic sanctions, whatever, to stop those products from reaching Iranian hands?

Mr. EINHORN. If you are talking about nuclear cooperation, we are taking action.

Senator BROWNBACK. With all due respect, I understand what you are saying with that, but you do have additional unilateral tools available to you toward supplier nations, whether those toward Russia, aid issues, whether it is Eximbank issues or funding, or toward the Chinese, the amount of trade that we heard Senator D'Amato talking about.

I am not suggesting you link those together, but I am saying that, if you look at the set of tools and resources you have and you look at the products that are getting into one of our major opponent's hands, they are coming from a couple of places and you do have additional tools.

Mr. EINHORN. Mr. Chairman, let me give you an example of how we use carrots as well as sticks. In the area of nuclear cooperation, a government needs a special agreement for cooperation with the United States if the U.S. is to supply nuclear reactors, major components, nuclear fuel, and so forth. Neither Russia nor China has such an agreement in effect now. Both Russia and China would like to engage in nuclear cooperation with the United States because they respect American reactor technology. We have told the Russians that we are not prepared to enter into a negotiation with them for nuclear cooperation unless we could resolve this question of cooperation with Iran.

Similarly, we do have with China an agreement, negotiated in 1985 but never implemented because of legislation that requires the President to make certain certifications that China is not assisting non-nuclear weapons states to acquire nuclear weapons. We have been working very hard with the Chinese on this. They have begun to deal seriously with our concerns, and one of our concerns is their cooperation with Iran, and they have begun to curtail that cooperation. We want to continue pushing that and using the inducement of this, of implementing this agreement for cooperation, as an incentive.

Hopefully, we will be able to use this effectively to encourage a curtailment of this nuclear cooperation with Iran.

Senator BROWNBACK. Senator Robb.

Senator ROBB. Thank you, Mr. Chairman.

I will turn to some economic questions that might be a little less prickly. The state of the revolution in Iran—your testimony in both cases and by Senator D'Amato and others would indicate that things are not going well. There is high unemployment, lower petrodollar income certainly compared to 10 years ago, an outdated oil production infrastructure, widespread poverty, *et cetera*.

The question is, in light of these deteriorating economic conditions, can the ideological cohesion remain in Iran? And I guess the broader question: Is the revolution in the process of imploding in your judgment?

Mr. WELCH. Well, you are right, Senator, that economic conditions there are worse. In fact, this is one of their significant vulnerabilities over the longer term. In a word, the revolution has done a lousy job in using the rich natural resources of this country. Oil production in 1979 I think was a couple times higher than it is today, just to give you one example. That is one of the reasons that our legislation has targeted this sector.

More broadly, I think they have benefited in the last year actually from slightly higher oil prices, and that has given them a bit of a cushion, a cushion that they have used to respond in a number of ways to what they perceive as the economic warfare being waged on them by the United States.

How has the revolution survived despite this? The revolution, after all, has been in Iranian terms more or less broadly popular for years. It has begun to decay in popularity in recent years, to the extent that some Iranians today describe it as sort of hollow.

That said, they have a strong, fairly authoritarian political establishment. Their method of governance is sufficiently strict to avoid the emergence of any credible local opposition inside Iran. They have used the tools that a modern state has very effectively in denying their people those opportunities. And, you know, even though they hold elections, they are very carefully designed to assure that the types of candidates that come forward to run for those seats are sort of one frame of mind, and they have managed to get along.

Is this a situation that is sustainable over the long term? I am not able to make a judgment on that right now. Let me say, though, that quite apart from whether it is or not, the things that they are doing which are a problem for us are the focus of our attention. We have not got a candidate in their Presidential race one way or the other. In our mind, the Iranian people ought to have a greater freedom of expression than they have today. That would be very good, if that happened. But the key issue for us at the moment is what this current Iranian regime is doing. That is the focus of our policy.

Senator ROBB. Well, given the eternal quest for finding the "Iranian moderates," is there any alternative emerging that is viable in your judgment?

Mr. WELCH. We do not subscribe to the theory that there are emerging Iranian moderates. We do not subscribe to it today. We have not before.

Senator ROBB. You made reference to the election that will be held next month. The leading candidate, as I understand it, is the speaker, although there may be others. Is there any sense that anyone who is elected would bring about a substantial change in terms of the relationship with the United States? Is there any likelihood under any circumstances that you can foresee that that would improve? Certainly, anti-American sentiment is frequently used by campaigns and/or appeal to nationalism, if not fundamentalism, in many countries quite successfully in stirring up the population or in achieving a particular electoral result.

But do you see any possibility of a positive change or do you see any inevitability in a decline if the most likely victor is successful?

Mr. WELCH. I see little prospect for meaningful change. On the contrary, I think there is substantial continuity in what this leadership and its likely successors want to do, and they are likely to continue doing it unless there are substantial costs to them for what they are doing.

I do not want to give Mr. Nateknuri or any of his competition a campaign plug, so I will avoid specific comment on them. But I do not see any important attraction in any of the candidates.

Senator ROBB. Do you want to speculate on why Mr. Rafsanjani may have consented to an interview that turned out to be interpreted by defense folks in defense ways, what his postelection plans might be?

Mr. WELCH. They from time to time give interviews, and I think it is part of an effort to influence and in some cases more than that, propaganda. I think their actions are more important than their words, though I would like a few of their words changed as well. I think that some of those are gratuitous. For example, on the peace process I cannot see what Iranian national interest that particularly serves.

That said, what they are doing is more important than what they are saying.

Senator ROBB. I think that is an appropriate place, Mr. Chairman, to leave it. I thank you and I thank the witnesses.

Senator BROWNBAC. Thank you, Senator Robb. I appreciate that.

You have stated that China's nuclear cooperation with Iran is suspended. Is that truly the case? We can certainly say that?

Mr. EINHORN. Let me clarify, Mr. Chairman.

Senator BROWNBAC. I would love a yes on that.

Mr. EINHORN. I would love a yes on it, too. But unfortunately, what I have to say is that it has cut back certain planned cooperation. It has rejected Iran's request that it provide a heavy water research reactor optimized for the production of plutonium. It has also suspended the sale of two power reactors, I pointed out, probably as much for siting and financial reasons than because of our urgings. But regardless, it is a good step.

There are certain other elements of cooperation we have urged them to suspend as well. I think they are taking our concerns seriously. We hope to see further curtailment, but there is still some ongoing cooperation.

Senator BROWNBAC. Thank you very much, panel members. You have a tough job and we share an objective. I have to tell you, I am disappointed with where we are today with this threat. I will keep watching. The committee will keep watching. We may have you back up again near-term on this, because I just do not think we are getting the job done, as witness what actually is occurring.

I do appreciate your commitment to working this issue aggressively. I know your concern and you view the threat very, very seriously, and I appreciate that.

Thank you very much.

Mr. WELCH. Thank you.

Senator BROWNBAC. Next, our third panel will be the Honorable James Woolsey, the former Director of the Central Intelligence Agency, and Mr. Leonard Spector, the Senior Associate Director of Nuclear Non-Proliferation Project for the Carnegie Endowment for International Peace, will be the two gentlemen we will call up.

I would state to them and to others watching that at 4 o'clock we have a vote that will be taking place on the floor. So what I would like to do if we could, Senator Robb and members of the panel, is try to conclude by that time, so that we would not be interrupting things as we bring things on back. So that would give us about 30 minutes to do that.



Senator ROBB. Mr. Chairman, that would be fine with me. As a matter of fact, I was going to have to depart anyhow. I want to catch the end of the Intelligence hearing that is taking place right now in the budget that I should attend. If the witnesses make relatively brief opening statements, I was going to wait for them. If they are not, I will have to look to the record for their statements. But I can certainly do everything to assist you in meeting that deadline.

Senator BROWNBACK. Well now, there is a motivation.

Mr. Woolsey, would you care to give us your brief opening statement.

**STATEMENT OF HON. R. JAMES WOOLSEY, FORMER DIRECTOR  
OF CENTRAL INTELLIGENCE**

Ambassador WOOLSEY. I would be delighted, Mr. Chairman. As Senator Robb knows, I do not read opening statements except when absolutely required to as an administration witness, and I certainly am not that now.

Senator ROBB. Mr. Chairman, I might also add, however, that he is not easily intimidated.

Ambassador WOOLSEY. But I would be delighted, if it is all right, to talk through a few points briefly that are in my opening statement and have it inserted in the record and try to integrate some answers to one or two questions that you asked other witnesses as I go. It might save a little bit of time for the two of us.

I think, Mr. Chairman, the key issue with respect to Iran is that its combination of support for terrorism around the world and its program of acquiring advanced conventional weapons, and particularly weapons of mass destruction and the means to carry them, ballistic missiles, that together—and they are very much part of a militant spirit and an attitude toward the West and toward many other countries in the East and Mideast as well which is a product of the Iranian revolution.

But it is also a set of views, particularly with respect to terrorism, that is not widely supported in Iran. I compare in my statement the situation in Iran today to the situation in Spain in the 1490's at the time of the Spanish Inquisition under Ferdinand and Isabella and Tomas de Torquemada. The clerics who support the terror—and that is the word for it—in Iran today have strong critics within the Shia clergy in Qum, in Iranian society. They are not real representatives of the spiritual tradition of Iran or of the clergy of Iran or certainly of the people of Iran.

What we have is a regime which, as Mr. Welch said, there are no moderates stepping forward. And the attitude which some of our European colleagues have fostered from time to time, that we had the moderate Rafsanjani and the hard line clerics, I think is nonsense. I think that approach has been substantially undercut by what the court has set forth in the Mykonos verdict in Berlin.

The government and those clerics that work with it are indeed very much the enemies of the West and common sense, and of the people of Iran.

I do believe that if we find that something as clear-cut as Iranian government support for the terrorist act at Khobar Towers can be shown convincingly to be the case, the United States has no real

option but to take extremely decisive action. The sort of action that I would think should be seriously considered would be, as you suggested, perhaps what Jim Hoagland wrote about in the *Post* this morning or perhaps the mining of their harbors.

But that, if it was carried out by the Iranian state through its intelligence services, was as close as one can come to an act of war, and we should treat it as forcefully as we possibly can. We are the world's superpower and no Iranian state should get away with that kind of conduct against the United States.

Now, in the circumstances that we are in with respect to the export of weapons of mass destruction, particularly from Russia and China—and they are now the problem. Other countries have been a problem in the past, but, as the two administration witnesses pointed out, there has been progress with respect to other countries, and there has been some progress with respect to Russia and China, but not nearly enough, as I think the chairman and you, Senator Robb, both suggested.

I believe that it is important to consider seriously taking other legal steps in the current circumstances. One reasonable one was mentioned by the chairman, such as amending the recent statute to clearly include such steps as the cruise missiles, the C-802's that now are quite threatening to U.S. Naval forces in the Gulf.

It would be feasible, I think, to look at some of the provisions that dropped out of the legislation when it was being considered in the House and Senate and to bring unilateral sanctions to bear on a secondary basis as the statute operates in cases other than investment in the oil and gas industry in Iran, to broaden it to include other investments there, because their Achilles heel really is their economy.

The mullahs have done a terrible job of managing the economy, and we have helped them do a terrible job with the sanctions. Our sanctions have not been totally successful, but they certainly have been in some cases useful to crippling the Iranian economy or at least making it limp a bit.

I think that if we focus on substantial steps that we can take to affect the Iranian economy, even in the absence of a judgment about Khobar Towers, and if it turns out that they were responsible for Khobar Towers strong and very decisive acts to cripple the Iranian economy, I believe we will be operating with tools that we can use better than most, tools that will be ones that we can bring allied and other support to bear on, and I think that we have a reasonable chance of turning this ridiculous policy of the Iranian government, its support for terror and its acquisition of weapons of mass destruction, around, not in short order, not in a few months, probably not even in a very few years. But with resolution and firmness, I think we do have some reasonable chance of success here.

I very much commend the committee for its interest and for holding these hearings.

[The prepared statement of Ambassador Woolsey follows:]

PREPARED STATEMENT OF R. JAMES WOOLSEY

Mr. Chairman, Members of the Committee, it is an honor to be asked to testify before you on this important subject.

The current American policy toward Iran—containing it, using economic sanctions against it, and pressing others to join us—is not rooted merely in disagreement with Iran's foreign policy and the rhetoric of some of its leaders. Even less is the current policy grounded in opposition to Iranians' religious beliefs, or to Iran's being an Islamic state. The United States has cordial and cooperative relations with many countries with whom it has major disagreements. It has close and friendly relations with states where Islam, including Islam of a fundamentalist character, is the predominant, even the governing, religion. Of course we will always strongly promote respect for basic human rights. But unless such are threatened, Iran's internal affairs are its own business.

American policy is heavily driven by a key decision that the government of Iran has made: to be the world's principal state sponsor, encourager, and bankroller of terrorism. It is a shame that George Orwell is not still around to write a second installment of "Politics and the English Language", because until the verdict last Thursday in Berlin in the 1992 Mykonos Cafe killings—in which the German court forthrightly set out the evidence that terror from Iran emanates from the "highest levels" of its government—a number of European and even American observers were showing substantial phraseological creativity in subtly disparaging the notion that the Iranian government has actually chosen a terrorist role for itself. These writings and speeches—urging a "critical dialogue" with Iran and promoting various types of economic and political openings to it—would have given Orwell a rich array from which to select fresh examples of the lengths to which some people will go to avoid unpleasant political facts.

Until the verdict last Thursday many of these individuals were calling for more "hard evidence" of Iranian government sponsorship of terrorism than had been made public up to that point. Such demands of course run into an obvious problem: some of the convincing detail (hard evidence indeed) must remain in the hands of governments in order to protect intelligence sources and methods. Unfortunately, if governments were to inform the public about a number of details regarding Iranian-sponsored terrorism they would also perforce inform Mr. Fallahian, the head of Iranian Intelligence, who would promptly see to it that we didn't learn any more about how the Iranian terror apparatus does business.

But there is plenty of information available publicly now, despite the absence of some details, to satisfy any unbiased observer. Both former Iranian President Baniadr and a recent important defector testified at the trial of those who carried out the assassinations of four Kurdish dissidents in 1992 that such killings are routinely approved not only by Mr. Fallahian, but also by President Rafsanjani and Ayatollah Khamenei through a "Council for Special Operations." The German court made public many facts about the Iranian government's terror and assassination apparatus. The embarrassment among the Iranian government's apologists in Europe mirrored that of its apologists in Near East last fall when, according to a number of press reports, Mahmoud Abbas, senior member of the PLO's Executive Committee, identified Iranian Intelligence as being involved in an attempt to kill Yassir Arafat, and the PLO consequently found it necessary to dismiss seventeen of Mr. Arafat's bodyguards.

The Iranian government's denials about its responsibility for terrorism should not be credited: Iran controls Hezbollah, funds Hamas, Islamic Jihad, the Popular Front for the Liberation of Palestine-General Command and other violent terrorist groups, and it generally oversees, encourages, helps plan, and provides several different types of support for a wide range of terrorist actions around the world. Incidents of assassination abroad by Iran have substantially increased under Rafsanjani and Khamenei compared to the days of rule by Ayatollah Khomeini. The press has reported some facts which suggest Iranian government involvement in the Khobar Towers bombing in Saudi Arabia. When this choice to use terror is made by a government (as was the case when the former South African government used terror abroad to support its policy of apartheid), such an act legitimately makes that nation subject to ostracism and to the admittedly imperfect but sometimes justified weapon of international economic sanctions. Sanctions are not a silver bullet, nor is Iran the only source of support for international terror. If Iran changed its policy international terrorism would not evaporate. But it would be substantially reduced and crippled.

The policies of the Iranian government, supported by some Iranian clerics, have produced much domestic resentment within Iran both because of repression and because of mismanagement of the economy. The destructive collaboration between the Iranian government and a sub-set of clerics, including in the support of terror, has also drawn articulate dissent from some prominent and brave Iranians, including several leading Shia clerics.

It is a major mistake for Western observers to blame Islam, or Shia Islam, for this state of affairs in Iran today. The problem is rather that a few men, in the government and among Iranian clerics, have chosen terror to be a major tool of the Iranian State. Just as it would be unfair to tar the entire Catholic Church of the time with the outrages of the fifteenth century Spanish Inquisition under Tomas de Torquemada and some of his fellow Dominicans (whose close partnership with Ferdinand and Isabella has some parallel to the collaboration today between the Iranian government and a portion of Iran's clerics), so it would be most unfair to blame Islam, Shia Islam, Iranian Twelver Shia Islam, or the majority of Iran's Shia clerics for the outrages of those who have brought about and who implement the policy of terror.

In her fine recent book, *God Has Ninety-nine Names*, Judith Miller clearly describes the widespread resentment in Iran today against those who sponsor terror both at home and abroad and the courageous resistance of important clerics and other public figures. Prestigious Ayatollahs, heads of Islamic Institutes in Qum, academics, and others are calling for those clerics who manage and support the government's terror apparatus to abandon that path and to "return to Qum", to the traditional role of advising and providing moral guidance to the people and the government. But it would seriously undercut the possibility that this popular resentment and these brave individuals will prevail in moving Iran toward sanity if we were to move now to accommodate the sponsors of terror before they change their ways.

Iran is also involved in a buildup of certain extremely troubling military capabilities. Although the state of its economy—partially attributable to its own mismanagement, partially to the effect of the various steps that the U.S. has taken and urged others to take—somewhat limits the resources available to it, Iran has focused on acquiring technologies and systems that pose serious threats to U.S. forces and to friends and allies of the U.S., especially to Israel and the states of the Gulf. In these efforts Iran has been the beneficiary of Russian, Chinese, and North Korean willingness to proliferate these systems and technologies.

One of the more dangerous developments in this line has been Russian assistance, since January of 1995, to complete Iran's Bushehr nuclear reactor, begun by Germany in 1974; through the operation of this reactor the Iranians will develop substantial expertise which will be relevant to the development of nuclear weapons. Russia completed its shipment of three Kilo-class diesel submarines to Iran a little over a year ago. Russia pledged in June 1995 not to enter any new arms contracts with Iran and not to transfer any uranium enrichment or other technology or advice that could assist a nuclear weapons program. *The Washington Times* reported yesterday, however, in an article by Bill Gertz, that Russia is in the process of selling advanced air defense systems to Iran, including the latest version of a hand-held anti-aircraft missile that will be given to Hezbollah terrorists. And I know from his background and from personal experience that Russia's Foreign Minister, Mr. Primakov (who was head of the SVRR, the successor to the foreign side of the old KGB, during the time I was Director of Central Intelligence), is extremely interested in building a close relationship between Russia and Iran. Clearly we need to stay tuned to the Russian-Iranian relationship.

According to press reports, Mr. Robert Einhorn, Deputy Assistant Secretary of State for Non-proliferation, whom I understand will appear before this committee, testified last week that China has now become the number one supplier of conventional weapons to Iran, replacing Russia. Most serious in this regard are the advanced C-802 cruise missiles that can threaten U.S. naval forces in the Gulf. China is also supplying components for chemical weapons to Iran as well as technology and advice to help with missile tests. Although China has promised not to proceed with a 1993 contract to provide two nuclear reactors to Iran and also not to provide a uranium enrichment device, clearly the Chinese-Iranian arms relationship requires constant monitoring. Moreover, like the Russian-Iranian relationship, it requires us to continue to search for leverage to exert against Russia and China in order to dissuade them from at least the most damaging and destabilizing transfers toward which those two nations and their military-industrial firms seem repeatedly to incline.

North Korea has long been in a class by itself in many ways—in the pathological weirdness of its ideology and its leaders, in the total failure of its economy, in the immediacy of the military threat that it poses to an important U.S. ally, South Korea, and U.S. forces located there, and in its willingness to be a source of proliferation. Press reports earlier this year suggest that North Korea has promised not to deliver Nodong I missiles to Iran; the range of these would come very close to bringing Israel within range of Iranian missile attack. Our leverage over North Korea is small, but whatever we have we should use to block such a transfer.

We may have some opportunity in the aftermath of the Mykonos verdict in Germany and the European nations' reaction to it to rally support for increased leverage against Iran to discourage its support both for terror and for proliferation of weapons of mass destruction and ballistic missiles. Security Council action to, for example, ban flights to and from Iran, cut its diplomatic representation abroad, or ban exports to it of petroleum-based technology should be considered. But realistically, the almost certain opposition of Russia and China in the Security Council would probably doom such efforts—not to speak of the even more ambitious (but potentially far more effective) notion of a comprehensive embargo on Iranian oil exports. It may be worth proposing one or more of these steps, even if we are likely to fail in the LTN, as a precursor to taking further unilateral steps of our own.

Generally speaking, I believe that secondary sanctions should be a tool of last resort in international relations; in my judgment the stresses they produce with friends and trading partners should mean that they are used only in very extreme cases. But this is such a case. Iran today, by its clear adoption of terror as a consistent tool of the state, has put itself in a different category than any other nation in the world. In my view, this is the key issue. If we were to be able to bring enough pressure on Iran to get it to halt its support for terror, it would be evidence of such a major change in the culture of the government of Iran that I believe other issues—such as proliferation—would be considerably easier to deal with. Thus terror is, in my view, at the heart of the matter. Under these circumstances, not only do I believe that secondary sanctions are justified against what it is now clear to any objective observer is the world's primary terror state, I believe it would be worth considering a strengthening of such steps—for example, by applying sanctions to foreign persons that export energy-related technology to Iran or even to those that conduct a range of commercial relations with Iran beyond the energy sector.

Iran is a wonderful country with a rich history and a talented people who follow a great religion. There are no fundamental strategic, religious, or other reasons why Iran and the United States should not have cordial, even friendly, relations. If those who govern Iran will stop murdering those who disagree with them, the path could and should be open to move toward both the removal of sanctions and progress on other issues as well. But if the United States loses its resolve before the terror stops, it will thereby tell Iran's contemporary Torquemadas that their support of terror is no longer a major issue with us—it will tell them that, essentially, they've won. As is the case on many difficult security issues, the rest of the world will not act constructively on this matter unless we lead. On the issue of Iranian terror the U.S. government has an obligation to Americans and to the rest of the world to be firm, resolute, unswerving, and uncompromising.

Senator BROWNBACK. Thank you, Mr. Woolsey. I appreciate that and appreciate your service to your country and your continued service. Mr. Spector, a brief opening statement.

**STATEMENT OF LEONARD SPECTOR, SENIOR ASSOCIATE AND  
DIRECTOR OF NUCLEAR NON-PROLIFERATION PROJECT,  
CARNEGIE ENDOWMENT FOR INTERNATIONAL PEACE**

Mr. SPECTOR. Thank you. I will attempt to summarize my statement and I would request that the entire statement be put in the record.

Senator BROWNBACK. Without objection.

Mr. SPECTOR. Thank you.

I think I would like to sort of pick up in a certain sense on some of the themes that Bob Einhorn was presenting, especially the notion that there are many tools in the tool kit that the administration has and the United States has to try to curtail the availability of weapons of mass destruction to Iran.

He mentioned a number of them, but there are others as well. In particular, we have got a very solid inspection regime in the nuclear side. We are going to have a new Chemical Weapons Convention, whether we join it or not, that is going to be available, that is going to put certain constraints on the chemical weapons side for

Iran. And we have, of course, these multilateral regimes to try to control exports going into Iran.

In addition, there are other tools which I would like to come back to, and these are the cooperative threat reduction and Nunn-Lugar programs, which are critical in containing nuclear and other very dangerous materials in the former Soviet Union so that they do not leak out. And also I think it is important to appreciate the counter-proliferation program of the Department of Defense, which really has to be brought to bear in these instances where the adversary is over the hump, where they have chemical weapons or biological weapons or missiles, and we are confronting not just an effort to stop the next stage in their development, but we are confronting actual capabilities that may be used against our forces.

A second point to make is that it really is worthwhile going down a list—and I happen to have 11 items on my list; I will not go through all of them now—which sort of differentiate the different programs. We know in the nuclear fuel, for example, that Iran is trying along three different routes, I would say, to advance its nuclear capabilities. It wants to acquire these reactors and so forth openly, and maybe it will learn a lot of the tricks of the trade by open nuclear energy development. It wants to acquire material clandestinely from Russia, and that is why controlling that material in Russia is so important. And it also is trying to develop clandestine facilities in Iran to manufacture this material on its own, and there I think we have pretty much stopped things as far as I can tell.

If you go down the list, biological weapons is another area. There is a program I guess where they are part way home. They seem to have stocks of biological weapons which the CIA has acknowledged. But there are many advances to be made yet. So it is important to differentiate sort of where we are and what we should be targeting.

I think the important target on BW is to make sure they do not learn how to mate it with missiles, and that is a difficult thing to do. Maybe we can be intervening through export controls and other measures.

In the chemical area, there are two programs, really. There is sort of the World War One style chemicals, which they have in large supply. And when Bob Einhorn mentioned 1,000 tons per year, I think it was, those are the old-fashioned gases, as I understand it. The more dangerous nerve gases—VX, Sonan, Teblin, and some of the others—are still under development. So in some ways we have lost the game, on the simple weapons. They are dangerous, they could be used in the battlefield. The more dangerous chemical weapons are still there for us to try to prevent the acquisition of.

I think the same is true in the missile area. Short-range Scuds they have got in large numbers, but they want to go to longer range systems, sophisticated systems, and we have a chance to fight the battle.

If I can just say a few more words about the nuclear area. I would say a point that really we would want to emphasize is the critical importance of American programs dealing with Russia to gain control over the Russian nuclear arsenal and over these mate-

rials. There are hundreds of tons of nuclear materials under poor security in Russia. The major push in Russia to get these under control is coming from us by virtue of the Nunn-Lugar and Nunn-Lugar-Domenici programs. It is really, really critical that those be sustained.

There is a report that I was just part of a panel at the National Academy of Sciences which goes into this in some detail. It commends the administration for some very important work it has done, urges a couple of changes, but the fundamental message of a year's work is we have got to keep up the effort, it must have Congressional support to continue with this. The report is called "Nuclear Concerns" and in my testimony I have got a footnote giving some additional details. It is being released today by the National Academy of Sciences.

In the biological and chemical areas, I think we do have to look a little bit at the counter proliferation options, defenses that we can have, vaccines, various chemical equipment. We have to anticipate that we are going to be confronting these in the battlefield.

I think this is also true in the missile area. I know there is a big debate over national missile defenses, but I think there is a national consensus that theater missile defenses are a useful tool in dealing with a threat that already exists and perhaps anticipating some types of threats that will be coming along.

You focused on sanctions with great emphasis. I have to say some of the information I have had is that a number of the cases that you have been alluding to—the Chinese transfers of chemical weapons, Russian transfers of missile technology, and so forth—are not sort of getting the first once-over now in the administration. Some of these cases have been around for a long time and they have gotten a lot of attention, and what we have seen is in a way deliberate inaction, perhaps for political reasons in terms of wanting to maintain a high level dialog with the Chinese with the summit coming up and so forth.

But the impression I have is that some internal decisions have been made about how serious the cases are, who is involved, what might be done, what sanctions laws might be triggered, and there has been a reluctance to carry forward and actually bite the bullet and impose sanctions in some of these cases.

Let me just make one final point, and that is to sort of put on the table an area that we have used as an incentive in the past to gain support from the Chinese and the Russians in the area of missile controls. This is our willingness to give them access to the commercial satellite launch market. In other words, we export satellites to them, our industry does, and they get the launch, they get the payment for launching this into space. They have, both the Chinese and the Russians, very excellent space launches, despite some recent setbacks.

But this is something of real value, and it benefits their missile industry. In the Chinese case the same firms are involved that are making some of the exports we are unhappy with. In the case of the Russians, although different entities are involved, if we in a sense threaten the ones that are making money off of this, they may put pressure on the other entities that are trying to sell a few missiles on the side.

We have done this in the past. There was a big episode in 1990 to 1993 where the Soviets and the Russians were selling something to India and we sort of said: If you stop that, we are going to open up all this commercial stuff. But the deal was they were supposed to be very disciplined, and I think we have seen some slackening on the Russian side, and in China as well. I think this would be a very useful, targeted sanction. It can be applied discretionarily. It does not have to have statutory authority, and I think it is a good area to explore as you push forward on the missile question.

Thank you.

[The prepared statement of Mr. Spector appears in the Appendix.]

Senator BROWNBACK. Thank you. And thank you, Mr. Robb, for joining us as well.

Let me just followup on this. It strikes me that, looking at this from the outside, that what we have done particularly concerning China and Russia, a number of known, known and publicly reported instances of products and items going to Iran that we do not want going there, that we have basically treated it as a secondary issue. We have said it is more important to us for our relationship with China or Russia than it is to stop these items from going on forward.

That is an outsider's observation. Is that an accurate one?

Mr. SPECTOR. Well, it is. I think it may be a legitimate observation and it may be a legitimate policy. I am certainly committed to non-proliferation. This is sort of what I have spent my professional career on. But you also have to realize that the overarching American interest, let us say vis-a-vis Russia, is to have a democratic Russia sustained, moving forward, getting some economic stability, and growing in a way that we want. So one could imagine totally pulling the plug on Russia with no foreign aid, for example, which is how one of the laws is framed. There is a waiver provision which the President has exercised so that foreign can continue.

On the other hand, you know, we want to pull the plug if there was absolutely no response from the Russians. But there has been. The worst elements of the nuclear collaboration have eased off and we are dealing with one item still, this nuclear power plant that will be under inspection. There will be some safeguards in terms of the kind of plant it is. So I would hesitate to say now is the time to cutoff foreign aid.

But let us go over to the missile area. In the missile area, you could identify a targeted sanction that would affect one sector that is getting a lot of income from the United States, and you might say: We are going to penalize you there. Maybe that is not the right sector. Maybe we would find a different one, and sort of try to make the punishment fit the crime a little bit and catch their attention in a more focused fashion.

I think you can do that with a couple of these areas.

When we try to deal with the Chinese and Pakistan, maybe it is a different issue. There there is much more at stake for China than money. They have a relationship with Pakistan and it is harder to push them away. But in a lot of these other cases it is really money, and if there is money, a penalty that is threatened to the Chinese or the Russians which is much greater than the financial



benefit they get from some of these exports, I think you may be able to prevail without having to do the wholesale pulling back of foreign aid and so forth that I think can be very tricky.

Senator BROWNBACK. Mr. Woolsey, you care to comment on that, whether we treated it secondarily?

Ambassador WOOLSEY. Over the last 2 years, I probably would not be the best witness on that, Mr. Chairman. I have a general impression in some of the areas that I have followed, such as ballistic missile defense issues with Russia, that we have soft-pedaled our objections to them too much and that we have been unwilling to be as forceful and clear as I think it is normally productive to be when negotiating with the Russian government.

I think it is fair to say, though, as Mr. Spector said and the two administration witnesses, that with respect to Russia on this nuclear issue there has been some progress. We would very much like to see them just stop on Bushehr, because Bushehr will let the Iranians develop an expertise in managing nuclear programs that will redound to their benefit and will help them in their illegal nuclear weapons programs, and we would very much like to see Bushehr stop.

But it is in fact the case that we have gotten something done, the U.S. Government has gotten something done with Russia with respect to the nuclear exports to Iran.

Senator BROWNBACK. What about Mr. Spector's suggestion, which I found intriguing? What about the commercial satellite launches? Is that a way that—we have heretofore used a carrot and stick approach, but we failed to pull the stick out because I guess we feel like the stick is too big or it whacks us when we use it. But here is a narrower one.

Ambassador WOOLSEY. One has to look at specific cases. For some—I am not familiar with the whole range of our cooperation with Russia on propulsion, but there are some cases in which the joint ventures and cooperation between American companies and Russian companies work in such a way that a Russian component has become important for American purposes as well. This has been part of the sort of growing partnership in some technological areas.

So we would want to make sure that if we did something like that, we did not do it in such a way that we undercut some capability that we as the United States wanted and needed. But as a general proposition, I think the thrust of his remarks are on the money.

Senator BROWNBACK. I want to thank both of you for laying out this basis, because what I was curious to get at was other assessments of what is taking place in the region and other options that we might have that are available to us. I view this as an extremely serious present threat that we have for the United States.

I appreciate particularly, Mr. Woolsey, your statement that if these terrorist activities are directly linked to the government of Iran that clear and decisive action on our part, including a potential for military action, be considered. I think that is a brave and a good recommendation on your part.

Ambassador WOOLSEY. If I could just add one point, Mr. Chairman. I think what we should not do is put a few cruise missiles

on a building or a radar in the middle of the night, or even a terrorist camp. Terrorists have a way of being able to move out of camps and tents and the like. We should do something that would seriously hurt the Iranian economy.

The two things that come to mind are one that Mr. Hoagland mentioned, the blockade, and that requires constant maintenance, constant patrols, confrontations with other, ships of other countries. It might be worth it. We might have to do it. But I must say the notion of mining Iranian ports and harbors strikes me as a very interesting and potentially appropriate response to the murder of a number of American servicemen if it in fact turns out to be the case that they did it.

Senator BROWNBACK. Mr. Spector, do you have any thoughts on that that you care to put forward?

Mr. SPECTOR. I think I would like to be a little cautious on this, but I do think there is a tendency to imagine that, because we have this enormous military capability in the region and globally, that we can take action without a response. We are dealing in this particular instance with a nation, Iran, that seems to have a global reach of its own, and we have seen episodes in Argentina, the bombings of the Israeli embassy there, we have seen activity in Europe, assassinations.

We will not necessarily be able to make our response and have that be the end of the issue. We may have a further response and we may find ourselves embroiled in more.

Not to respond is unthinkable if this in fact how things emerge, that we have a smoking gun. But I think as we take such action we also have to appreciate that we are doing this at some risk of further continuation of a dangerous relationship.

Senator BROWNBACK. So if we can establish undeniably that this is attached to the Iranian government's decision, this bombing that took place, in your estimation we must respond, but that there are consequences even in our response? Am I hearing you correctly?

Mr. SPECTOR. Well, I think to the extent that we can respond with others, perhaps. I do not know how much further we can take the economic blockade. We might find that that was more decisive in the certain sense that there was no way for Iran to respond. If you take a very precise military action—mining—it gives them a focus. We again become the target, and they have measures they can take back if they care to take the risk.

So I think as one measures out the punishment one has to be aware of the fact that there may be further steps that go beyond and try to develop a response that deals with that as well.

Senator BROWNBACK. Are economic sanctions sufficient for a bombing activity?

Mr. SPECTOR. Well, I do not know if you had—these are difficult questions, so I do not mean to suggest a decisive response. But if you could imagine a total, a global embargo or a virtual global embargo on the purchase of Iranian oil that all of our allies supported, including Japan and the Western Europeans, because they too are outraged by this, that would have a devastating effect on the Iranian economy of the kind that we were just talking about, but it would not have a military dimension and it would not be only America.

If you take military action and you risk lives of, let us say, Iranian sailors or what have you, and you have only the United States acting, you do create a target. I am not saying that you might not decide it was appropriate to do it anyway. You might very well decide it was appropriate to do a unilateral military act. But as you weigh that decision, you need to appreciate the other dimension.

Ambassador WOOLSEY. That would be preferable, I agree. But given their behavior over the last several years, I rather despair of our European friends being willing to pay higher oil prices in order to effectively retaliate against the killing of American servicemen.

Senator BROWNBACK. I just pose an interesting question. Do you think that other Security Council members would go along with economic or military actions if this bombing is laid at the feet of the Iranians?

Mr. SPECTOR. Well, I think it is very hard to speculate. My fear is that, although we may be convinced—and do not forget, some of the evidence that is going to be coming before you, let us say, and before the President will be very classified evidence. We are not going to have the whole story out before the public that we can display and build a case the way we did, let us say, when Saddam Hussein invaded Kuwait. It is going to be a different matter, and I think we are going to have difficulty going to the Security Council.

But in other means behind the scenes, working with allies, we might at least imagine an alternative. And you might reject the alternative. You might decide military action was best. But as I say, it may not be cost-free.

Senator BROWNBACK. Gentlemen, I appreciate this very much. This has been the opening hearing for me as chairman of this subcommittee. I think it has been very enlightening. It is certainly a tough subject, but it is one that we agree upon for action. Maybe we do not agree quite which actions to take, but I hope we can continue to move forward.

I continue to be disappointed about how ineffective I think we have been to date in stopping the things we want to. We have had some success, but we have not gotten near where we need to get to.

So we are going to keep watching this issue, and we would appreciate any further input that you might be willing to give and I would look forward to that.

Ambassador WOOLSEY. Thank you, Mr. Chairman.

Senator BROWNBACK. Thank you very much. Thank you all for attending.

This hearing is adjourned.

[Whereupon, at 4 p.m., the subcommittee was adjourned.]

## **THE ARMING OF IRAN: WHO IS RESPONSIBLE?**

**TUESDAY, MAY 6, 1997**

U.S. SENATE,  
SUBCOMMITTEE ON NEAR EASTERN AND,  
SOUTH ASIAN AFFAIRS,  
OF THE COMMITTEE ON FOREIGN RELATIONS,  
*Washington, DC.*

The subcommittee met, pursuant to notice, at 10:03 a.m. In room SD-419, Dirksen Senate Office Building, Hon. Sam Brownback (chairman of the subcommittee) presiding.

Present: Senators Brownback and Feinstein.

Senator BROWNBAC. We will go ahead and proceed with this hearing. Thank you all for joining us this morning.

### **OPENING STATEMENT OF HON. SAM BROWNBAC, U.S. SENATOR FROM KANSAS**

Senator BROWNBAC. On April 17, this subcommittee held a hearing on the problem of Iran and proliferation. As a result of the testimony heard at that hearing, I concluded that the United States has not, is not doing enough about the problem of proliferation to Iran.

Our approach to the problem I believe must be two-fold. First, we must seek to deny the Iranians the foreign exchange they need to promote terrorism abroad and continue with their massive military buildup. The United States has done its part toward that with an embargo on trade with Iran. I commend Senator D'Amato for forcing the administration to take that step.

We have also tried to create disincentives for other nations to invest in Iran's oil sector. But the truth is that, in a world thirsty for oil, we will never succeed in stopping all trade with Iran.

Any doubts about the limits of this policy should have been put to rest by the recent criminal verdict in Germany. A German court has told the people of the world that the highest leadership of Iran was behind the assassination on foreign soil of regime opponents. But the European Union, despite exhortations from the United States to take a hard line, decided to do nothing more than end the so-called critical dialog and suspend high level diplomatic contacts.

In other words, there were no economic sanctions, just a frown, and a diplomatic slap on the wrist.

This explains why it is essential that we have a second prong in our strategy for dealing with Iran. In addition to denying Iran hard currency, we must also deny Iran the possibility of purchasing

arms and weapons of mass destruction. The Europeans have an arms embargo in place. But the Chinese and the Russians do not.

The Clinton Administration has done too little to impress upon China and Russia that our relationship cannot remain the same if those nations continue to arm Iran.

It is little wonder the Europeans pay the United States no heed on what to do about Iran. They see us pushing our own companies around but continuing to coddle the nations that persist in directly arming the Iranians.

The message we are sending could not be clearer: cutting off Iran's access to arms and weapons of mass destruction is less important to us than maintaining good relations with Russia and China.

Consider that the United States is aware that Russia is selling a nuclear reactor to Iran, that Russia is contemplating a major new arms deal, that Russia has discussed the delivery of ballistic missiles to Iran, and more and more.

Yet the President, who is required by law to cutoff the hundreds of millions in assistance the United States provides Russia every year without a waiver, has granted that waiver. Consider, in addition, that China has negotiated the delivery of nuclear reactors to Iran, provides Iran with chemical weapons precursors, has delivered missile guidance equipment, and more.

We cannot pretend that we have a policy aimed at isolating Iran if we continue to aid and abet Iran's suppliers.

Before us today we have three experts on proliferation. I have asked them here because I want to hear about the Russian, Chinese, and North Korean companies that are arming Iran and the governments that are doing nothing to stop them.

As in our first hearing, we will work only from unclassified information. You may also notice that there are no representatives from the administration here today. Let me assure you they were invited and requested to come, but they decided not to attend and testify. I hope they are here monitoring the hearing to hear what the testimony of these three witnesses has to say.

Finally, I will ask our witnesses and others to think about these names: China Precision Engineering Institute, China Precision Machinery Import-Export Corporation; MINATOM; Rosvoorouzhnie; Aviaexport; Lyongaksan Import Corporation; Changgwang Sinyong Corporation.

Between them, these companies have helped Iran move closer to a successful confrontation with the United States or with our allies.

Now think about this. In at least one instance I am aware of, the U.S. Government was licensing sales to a company we knew was engaged in proliferation of nuclear technology. How can we pretend to have a serious nonproliferation policy?

I do not believe these companies should do business with the United States. I do not believe their executives should be allowed into the United States, and I do not believe these companies should benefit from U.S. subsidies. I do not think there is a man or woman in this Congress who would disagree with me.

Either way, I intend to test that premise because in the coming weeks I intend to offer legislation that will affect some of the steps I believe must be taken to address this problem.

We have a panel of experts joining us today to testify about the issue of proliferation and who is supplying the Iranians with these weapons, both conventional and those of mass destruction. I am delighted to have this panel with us today.

They are: Dr. Gary Bertsch, the Director of the Center for International Trade and Security, Professor of Political Science, University of Georgia; Dr. Gary Milhollin, Director of the Wisconsin Project on Nuclear Arms Control; and Dr. W. Seth Carus, Visiting Fellow with the National Defense University.

By prior discussion and arrangement, Dr. Milhollin will be the first to testify and then Dr. Bertsch, and Dr. Carus will be the last.

What we would like to do, gentlemen, is to invite your testimony, either as written or you can summarize if you would like. We will take the full written testimony into the record. Then we would like to have an exchange regarding questions. Particularly, at the end of it, once we site to who is doing the supplying of these arms, what then should the response of the U.S. Government be to this situation?

I am thankful for all of you joining us. I very much appreciate it.

Dr. Milhollin, you are first up and the microphone is yours. Welcome to the committee.

**STATEMENT OF DR. GARY MILHOLLIN, DIRECTOR, WISCONSIN PROJECT ON NUCLEAR ARMS CONTROL, WASHINGTON, D.C.**

Dr. MILHOLLIN. Thank you very much, Senator. I am honored to be here.

I hope I can shed some light on this very important, but difficult, question.

I would like to start by saying that I don't think there is any doubt that Iran is aggressively trying to develop weapons of mass destruction and the missiles to deliver them. I think there is a general consensus on that subject, at least in this country.

Second, Iran's progress in this domain, her progress has depended on outside help and will continue to depend on it in the future, just as Iraq's did. So this is kind of the classic case of export control. Can you isolate a country technologically and keep its program from developing?

So far, we have made some progress, but it is not nearly good enough.

In my testimony, I have listed several specific cases, and I have attached them as an appendix to the testimony. I will just go through them briefly here.

Who is supplying Iran? Well, first, the question of anti-ship missiles has come up. I think you, Senator, have alluded to this previously. We know that China Precision Machinery Import-Export Corporation is supplying or has supplied the anti-ship missiles to Iran. What we don't know or at least I have not seen anywhere yet, is the fact that the United States actually approved a series of dual-use exports to that very company during the time when its missiles were being developed. I have listed those in my testimony in the appendix.

One of them is a computer work station for the simulation of wind effects. That would be quite useful in designing an anti-ship

missile. These exports are of sensitive technology controlled for export purposes by the Commerce Department and approved to Iran and to this particular company.

My project publishes a data base called "The Risk Report," which gives details on foreign companies that contribute to the building of weapons of mass destruction. I have included a printout in the appendix which describes China Precision Machinery Import-Export Corporation. It is Case Number 1. Also, I have listed there the exports by the United States to that company.

So if the question is who is helping Iran build anti-ship missiles that threaten our sailors, the answer may well be the U.S. Commerce Department because it approved those exports.

The second case I would like to describe is a case of air surveillance radar.

Iran recently imported a powerful surveillance radar from the China National Electronics Import-Export Corporation. It can detect targets 300 kilometers away, and if the United States ever comes to blows with Iran, American pilots will have to contend with that radar.

When that radar was being developed, that is, from 1989 to 1993, the U.S. Government approved the export of \$9.7 million worth of sensitive equipment to China National Electronics. The approvals included equipment for microwave research, a large scale system for testing integrated circuits, and \$4.3 million worth of computer gear. All of this equipment seems to me quite useful for developing radar. But it was all licensed to this Chinese company, which then turned around and supplied a surveillance radar to Iran.

So, again, it seems that our own Commerce Department may be one of the culprits in this drama in which Iran is getting important outside supplies.

I would like to point out that in these two cases the exports were all approved under the Bush Administration. I urge this subcommittee, and I have urged the full committee for some time, to obtain the exports approved, the records of the exports approved under the Clinton Administration. Since the Clinton Administration has become more pro-export than the Bush Administration was, I suspect that, if the committee looks at the record, it will see that many Chinese companies are receiving U.S. products and then turning around and marketing things to Iran and Pakistan.

One of the reasons why Iraq was able to import so much dual-use equipment before the Gulf War was the absence of Congressional oversight of the export licensing process. I urge the committee not to let this happen again and to exercise its very important role of oversight on the export licensing process. The committee should get the records, it should look at them and evaluate them, and see whether the Chinese companies that are supplying Iran are getting U.S. products.

I am very strongly suspicious that they are.

The third case in my testimony is a fusion reactor. It was supplied to the Iranians by the Chinese Academy of Sciences. The fusion reactor is used for nuclear training. But, as we know, the Iranians are using their nuclear knowledge to build nuclear weapons.

The Academy of Sciences also helped develop the DF-5 intercontinental ballistic missile, which is the only Chinese missile that

can reach the United States. Despite these activities and despite its supply of Iran, the Chinese Academy managed to import an American super computer just last year. That super computer is now in a network at the disposition of any Chinese scientist or engineer who is designing a long-range missile for a nuclear weapon.

Case number 4 is uranium exploration. I have attached to my testimony some pictures from our data base, "The Risk Report," which shows the Beijing Research Institute of Uranium Geology prospecting for uranium in Iran. Any uranium that this Chinese institute finds will go into Iran's nuclear weapon program.

There is also another picture with some individuals, which is fairly interesting. It shows the head of the Iranian nuclear program standing next to the deputy chief of the China National Nuclear Corporation. The China National Nuclear Corporation is the same company that just sold the ring magnets to Pakistan that got so much press attention. It will be the key player in any nuclear cooperation between the United States and China.

Right now, the administration and Westinghouse are trying very hard to get the agreement for cooperation, which has lain dormant since 1984, revived so that the United States can begin supplying nuclear technology to this company—this company that has just supplied the ring magnets to Pakistan and that is prospecting for uranium in Iran now.

So if we look at this pattern, we see that the United States itself could do a lot more just in controlling our own exports and in controlling our own cooperation to control the success of Chinese companies that we know are helping Iran, or, I guess, to restrict the growth and success of Chinese companies we know are helping Iran.

Also I would like to just mention, if I could, patterns of supply.

It has now been admitted by the State Department that China is continuing to supply poison gas ingredients, equipment, and so forth, to Iran. I know that this has been going on for at least 5 years.

It would be nice to think that we are doing something about this, but we are not. The policy of constructive engagement we have been following toward China is basically out of gas.

There are a number of studies the State Department has done which analyze the facts and the law necessary to impose sanctions on China for its exports to Iran. Those studies have lain dormant for at least 6 months.

The State Department does not want to finish the administrative process because, if it did, it would have to apply sanctions which would disrupt, and perhaps end, its engagement policy.

I urge the committee to get copies of these studies and to query the State Department. Ask the State Department why it is that these studies have simply been ignored, are not being implemented, and why it is that the administrative process is not being completed.

In the nuclear domain, I think we are looking at blackmail. It is a gentle, sort of constructive engagement type of blackmail, but there it is nevertheless. The Chinese have threatened, in effect, to supply the Iranians with a plant to produce uranium hexafluoride and with a research reactor. Those two deals are now suspended,



or on hold, pending the outcome of China's talks with us about a nuclear cooperation agreement. I think the message is fairly clear: if the agreement does not happen, that is, if we do not start selling China American nuclear technology, then China will go through with the deals for the uranium hexafluoride plant and the research reactor.

Russia is playing the same game. It agreed to give the Iranians a plant for actually enriching uranium and also a research reactor. Those two deals, as well, did not go through. But they still could.

In effect, we are being told if you don't like what's going on now, it could be worse.

The final point I would like to make is that our export controls are not realistic.

The administration has taken the position that you can open the doors to exports of sensitive technology to everybody in the world except a few countries that you designate as "rogues" and that that kind of system will work. Well, it does not work. The rogues can get things through retransfers, and if you are not going to be credible with respect to China, then other countries are going to use that lack of credibility to justify their own behavior with respect to Iran.

For us, Iran is a rogue. For Germany, Iran is a top customer. We are following an engagement policy toward China, which amounts to holding your nose and exporting.

The Germans look at us and say well, why can't we follow the same policy toward Iran? "We will hold our nose and export to Iran." We are following the same policy, in my opinion, now toward Iran—I'm sorry, toward China—excuse me. We are following the same policy toward China now that we, the United States, followed toward Iraq before the Gulf War. It was basically constructive engagement then. The idea was that we could bring Saddam into the mainstream of nations if we just did not isolate him; and if we isolated him and cutoff U.S. exports, then the Europeans would just get the business. That policy failed. But we are still using that policy with respect to China today, and I think it is also failing with respect to China.

Thank you.

[The prepared statement of Dr. Milhollin follows:]

#### PREPARED STATEMENT OF GARY MILHOLLIN

I am pleased to appear today before this distinguished Subcommittee, which has asked me to discuss the question of who is helping Iran build weapons of mass destruction. The Subcommittee has also asked whether the United States needs to do more to discourage Iran's helpers.

There is no doubt that Iran is aggressively trying to develop nuclear weapons and the missiles to deliver them. There is also no doubt that Iran has already built chemical weapons. Iran's progress in all these efforts has depended almost entirely on outside help, and will continue to depend on it in the future.

#### Specific cases

A great deal is known about who is supplying Iran. I would like to begin by looking at some specific cases. I have listed them in the appendix to my testimony:

##### *Case #1: The C-801 and C-802 anti-ship missiles*

Iran recently imported this new anti-ship missile from the China Precision Machinery Import-Export Corporation (CPMIEC). Admiral John Redd, our naval commander in the Persian Gulf, took the unusual step of complaining publicly about the sale. Iran appears to have up to 60 of these mis-

siles so far, plus fast attack boats to carry them. The missiles are a threat to our sailors and to commercial shipping in the Gulf.

Unfortunately, these missiles may have been built with help from the United States. In the appendix to my testimony, I have listed the sensitive equipment that the U.S. Commerce Department approved for export to China Precision Machinery from 1989 to 1993. It includes things like computer workstations for the simulation of wind effects, flight data recorders, and navigational instruments. The ability to simulate wind effects is something the designer of an anti-ship missile could find quite useful. I would like to emphasize that all of this equipment was deemed so sensitive that it required an individual validated export license to leave the United States.

I have also attached a print-out from the database that my Project publishes. It is called the *Risk Report*. It lists the companies around the world that are suspected of contributing to the proliferation of weapons of mass destruction. It includes China Precision Machinery Import-Export Corporation, which was sanctioned in 1993 by the United States for exporting missile components to Pakistan. It markets the M-family of nuclear-capable missiles.

If the question is: Who has been helping Iran build anti-ship missiles to threaten our sailors? The answer may well be: The U.S. Commerce Department.

*Case #2: Air surveillance radar*

Iran recently imported a powerful surveillance radar from the China National Electronics Import-Export Corporation. The radar is now part of Iran's air defense system, and it can detect targets up to 300 kilometers away. If the United States ever comes to blows with Iran, American pilots will have to contend with it.

This radar too seems to have been built with help from the United States. In the appendix to my testimony, I have listed the sensitive, controlled equipment that the U.S. Commerce Department approved for export to China National Electronics from 1989 to 1993. It totals \$9.7 million. It includes things like equipment for microwave research, a very large scale integrated system for testing integrated circuits, equipment for making semiconductors, and a shipment of computer gear worth \$4.3 million. All of this equipment appears highly useful for developing radar, and all of it was deemed so sensitive that it required an individual validated export license to leave the United States.

If the question is: Who has been helping Iran build air defenses? The answer again, may well be: The U.S. Commerce Department.

I would like to point out that in these two cases, the exports were all approved under the Bush Administration. I urge the Subcommittee to obtain and study the exports approved under the Clinton Administration. This Subcommittee has the right to obtain all Commerce Department records on export licensing. The generally pro-export stance of the Clinton Administration leads one to suspect that China is importing even more sensitive high-technology from the United States today. I cannot emphasize too strongly the need for effective Congressional oversight of our export licensing process. The lack of Congressional oversight was one of the main reasons why so the Commerce Department approved so many sensitive American exports to Iraq before the Gulf War.

*Case #3: A fusion reactor.*

In 1993-94, the Institute of Plasma Physics of the Chinese Academy of Sciences transferred a nuclear fusion research reactor to the Azad University in Tehran. The reactor is a training device ostensibly used for peaceful purposes. As we know, however, Iran is using its nuclear knowledge to build nuclear weapons. In addition to supplying Iran, the Academy has helped develop the flight computer and the nose cone for the Chinese DF-5 intercontinental missile, which can target U.S. cities with nuclear warheads. The Academy has also studied the effects of underground nuclear weapon tests and ways to protect against nuclear explosions.

Despite all these activities, and despite being a well-known contributor to Iran's nuclear program, the Academy of Sciences managed recently to import an American supercomputer. In March 1996, California-based Silicon Graphics Inc., sold the Academy a powerful supercomputer without bothering to obtain a U.S. export license. The computer is now part of a network linking all of China's high-tech institutes and universities, which means the

computer is accessible to anyone in China who is designing a nuclear weapon or a strategic missile.

So if the question is: what happens to a Chinese organization that helps Iran do nuclear research? The answer is: It can import an American supercomputer.

*Case #4: Uranium exploration*

The Beijing Research Institute of Uranium Geology (BRIUG) prospects for uranium around the world. Attached to my testimony is a picture of this Institute prospecting in Iran. Any uranium, it finds is likely to go directly into Iran's nuclear weapon program. This Institute is part of the China National Nuclear Corporation (CNNC). I have also included a picture of the Deputy Chief of the China National Nuclear Corporation posing with Reza Amrollahi, Vice President of Iran and President of the Atomic Energy Organization of Iran.

CNNC has been implicated in the sale of ring magnets to the A. Q. Khan Research Laboratory in Pakistan, which enriches uranium for nuclear weapons. CNNC is also involved in the development of Pakistan's secret nuclear reactor at Khusab and a CNNC subsidiary is currently constructing a power reactor for Pakistan at Chashma. CNNC would be the key player in any nuclear cooperation agreement that might be implemented between the United States and China. Right now, the Administration, under pressure from Westinghouse, is planning to revive the cooperation agreement that has been stalled since 1984 because of China's bad proliferation behavior.

If the question is: What happens to a Chinese organization that helps Iran prospect for uranium and helps Pakistan make nuclear weapons? The answer is: Westinghouse and the Clinton Administration try to find a way to sell it American nuclear technology.

**Patterns of supply**

In addition to these specific cases, there are patterns of supply. These too are well known. In 1995 I discovered, and wrote in the *New York Times*, that the United States had caught China exporting poison gas ingredients to Iran, and that the sales had been going on for at least three years. The State Department sanctioned the front companies that handled the paperwork, but did nothing to the Chinese sellers for fear of hurting U.S. trade relations.

China's poison gas shipments have only become worse since then. In 1996, the press reported that China was sending entire factories for making poison gas to Iran, including special glass-lined vessels for mixing precursor chemicals. The shipments also included 400 tons of chemicals useful for making nerve agents.

The result is that by now, in 1997, China has been outfitting Iran with ingredients and equipment to make poison gas for at least five years. When I spoke to U.S. officials recently, I asked them whether there was any change in China's export behavior on poison gas. They said that the poison gas sales had continued to the present time, unabated. On April 10, 1997, in testimony before a subcommittee of the Senate Committee on Governmental Affairs, Deputy Assistant Secretary of State Einhorn confirmed this fact.

There is no reason to think this pattern will change as long as the United States follows its current policy of "constructive engagement." Last fall, the executive branch finished a number of studies on China's missile and chemical exports to Iran and Pakistan. The studies contained all the legal and factual analysis necessary to apply sanctions, but they have lain dormant since then. The State Department has chosen not to complete the administrative process because if it did, it would have to apply sanctions and give up its engagement policy. At present, the sanctions law is not achieving either deterrence or punishment, as Congress intended.

This lack of an American reaction has encouraged China to harden its position. China is now saying, explicitly, that it will not even talk to us about missile and chemical proliferation unless we are willing, at the same time, to discuss restraints on our arms sales to Taiwan. The arms sales, of course, are caused by China's threat to Taiwan. And to make matters worse, the Chinese are beginning to complain about our policy of providing theater missile defenses to countries like Japan that might be vulnerable to Chinese missile attacks. The Chinese say that this is another form of missile proliferation.

**Nuclear blackmail**

In addition to poison gas technology, China is also helping Iran in the nuclear domain. China has agreed to sell Iran a 25 to 30 megawatt nuclear reactor, which is

an ideal size for making a few nuclear weapons per year. And China has also agreed to sell Iran a plant to produce uranium hexafluoride from uranium concentrate.

The hexafluoride plant is essential to enrich uranium for use in atomic bombs. Bombs fueled by enriched uranium have become the holy grail of developing countries trying to join the nuclear club. Such bombs are easier to make than those fueled by plutonium because uranium is easier to work with, less toxic, and easier to detonate with confidence that a substantial nuclear yield will result. Iraq was close to making a uranium bomb when the Gulf War began. The first bomb ever dropped was a uranium bomb that the United States released over Hiroshima without having to test it.

There is no peaceful use for enriched uranium in Iran. Enriched uranium is used to fuel reactors, but the only reactors in Iran that could use such fuel are being supplied by Russia, which is also supplying their fuel. The conclusion has to be that Iran wants to use this plant to make atomic bombs. The fact that China is even considering this deal shows that China is quite ready to put nuclear weapon-making capability into the hands of what the United States regards as a terrorist nation.

These two sales have not been finalized. In effect, they are being held over our heads like swords. If we don't agree to implement our stalled nuclear cooperation agreement with China, which would allow China access to American nuclear technology, then China will complete these two dangerous export deals with Iran. This is essentially nuclear blackmail.

Russia is Iran's other main nuclear supplier. In 1995, Russia agreed to supply Iran two light water power reactors plus a string of "sweeteners." The 44 "sweeteners" are sensitive items that should not in good conscience be exported, but which suppliers throw in to sweeten a larger deal. In this case, the sweeteners were a centrifuge plant to enrich uranium, a 30–50 megawatt research reactor, 2000 tons of natural uranium, and training. The centrifuge plant was canceled; the training is apparently going forward; the status of the research reactor and the uranium is unclear.

This deal too included some blackmail. The enrichment plant would only serve to make nuclear weapons, for the reasons I have already stated, and the same is true of the natural uranium. The research reactor would have been ideal, like the Chinese one, for making a bomb or two per year. Minatom, the Russian Nuclear Energy Ministry, was quite prepared to supply all of these items. Minatom only agreed to cancel or suspend them in a "compromise" to make the power reactor deal look better. The message from the Russians is clear: If you don't like the reactor deal, how would you like a centrifuge deal?

### Missiles

Both China and Russia are helping Iran make missiles. In June, 1995, the *New York Times* reported that the Central Intelligence Agency had concluded that China had supplied "dozens and perhaps hundreds" of missile guidance systems to Iran, along with computerized machine tools. In July, *Jane's Defense Weekly* reported that U.S. officials had confirmed that China had sold Iran rocket propellant ingredients as well as the guidance components. This case is the subject of one of the studies that is now languishing in the State Department.

In February of this year, the *Washington Times* reported that Russia had sold Iran plans for building the 1,240-mile range SS-4 missile, together with guidance components, and that U.S. Vice President Al Gore protested the sale during talks with Russian Prime Minister Viktor Chernomyrdin. If this report is true, it could help Iran take an important step forward in its nuclear missile program. According to the *Nuclear Weapons Databook*, the SS-4 is a single-stage, liquid-fueled missile capable of carrying a one megaton nuclear warhead. Its diameter is 1.65 meters (65 inches), almost twice that of Iran's existing Scud-B. The larger diameter of the SS-4 would allow Iran to mount a much larger warhead, thus reducing the problem of miniaturization for a first-generation nuclear device.

### Realistic export controls

Because the United States has little diplomatic leverage with Iran, export controls are the main vehicle for impeding Iran's efforts. Unfortunately, the Clinton Administration's decision to slash export controls had made it much easier for Iran to get what it needs.

Dubai is an example. In our database, we have listed 22 Iranian companies operating in Dubai's free trade zone, the main purpose of which is to handle re-exports, frequently to Iran. These companies are legally off-limits to American exporters because of the U.S. embargo against Iran, but the companies are probably getting U.S. goods anyway because U.S. exporters have no way of knowing the companies are Iranian. The U.S. Commerce Department has never published a list of Iranian com-

panies operating in Dubai. In fact, after the Commerce Department's recent decontrol of high-speed computers, U.S. companies can now ship powerful supercomputers (operating at up to 7 billion operations per second) to buyers in Dubai without an export license. And because Dubai has no effective export control system, there is nothing to prevent these supercomputers from going on to Iran or anywhere else. Iran now imports more goods through Dubai than through its own ports. The lesson here is that you cannot slash controls on exports to everyone in the world except the "rogue nations" and expect the rogues not to get things through retransfers.

We need a global policy on export controls, but we don't have one. The United States is following the same policy toward China today that it followed toward Iraq before the Gulf War. It can be summed up as: "Hold your nose and export." China's nuclear, chemical and missile exports to Iran and Pakistan have been greeted by the same American silence that greeted Iraq's effort to smuggle nuclear weapon triggers out of the United States before the Gulf War. Rather than apply sanctions, or even complain publicly about Iraq's violation of the Nonproliferation Treaty, the State Department chose "constructive engagement." It would be better to maintain our influence with Saddam Hussein through trade, the State Department argued. By selling him what he wanted, we would bring Saddam into the mainstream of nations. Sanctions would only hurt American exporters and allow the Europeans and the Japanese to get all the business. It is now clear what that strategy produced. The United States was lucky. If Saddam had not been foolish enough to invade Kuwait, we would be facing a nuclear-armed Iraq with its shadow over most of the world's oil supply.

America's European allies are also following this same policy of constructive engagement toward Iran—a policy that the United States officially deplores. The United States now maintains a complete trade embargo against Iran, but our European allies have refused to join. They have refused in part because they want the export earnings, but also because they regard the U.S. position as hypocritical. They justly observe that the Clinton Administration, while giving lip-service to arms control and nonproliferation, routinely subordinates these objectives to commercial interests. The Administration decided at the outset of its tenure to promote U.S. exports as its primary foreign policy objective. But if the United States can hold its nose and trade with China, why can't the Europeans and the Russians hold their noses and trade with Iran? In fact, most of the countries that worry Washington are interconnected, so the failure to confront proliferation by one usually means there will be a failure to confront proliferation by others.

I believe that Iran will acquire nuclear weapons within the next ten years unless something intervenes to stop the current effort. If the Gulf War had not intervened to stop Iraq, Saddam Hussein would have had nuclear weapons by now. When Iran does get the bomb, the Clinton Administration's decision to slash export controls will be one of the main reasons for Iran's success.

[Additional information submitted by Dr. Milhollin appears in the appendix.]

Senator BROWNBACK. Thank you very much, Dr. Milhollin. I appreciate the specificity of your testimony. We will engage in some discussion about that a little bit later.

Dr. Bertsch, we are delighted to have you here at the committee as well. As I stated earlier, if you would like to submit your full statement for the record, you can, and you can just discuss or summarize. Or, if you would like to present it by reading it, that would be fine as well. It is up to you, your choice. Welcome to the committee.

**STATEMENT OF DR. GARY BERTSCH, DIRECTOR OF THE CENTER FOR INTERNATIONAL TRADE AND SECURITY, PROFESSOR OF POLITICAL SCIENCE, UNIVERSITY OF GEORGIA, ATHENS, GEORGIA**

Dr. BERTSCH. Thank you, Senator. I wish to thank you for the invitation to appear today.

My colleagues and I at the University of Georgia are involved in studies of issues being addressed by this subcommittee. Former Secretary of State Dean Rusk, Ambassador Martin Hillenbrand,

and I put together a program at the University of Georgia looking in depth at American and international export control policy. We are pleased to share our work with you and Members of the Congress today.

In addition to my formal statement, the associate directors of our center, Dr. Richard Cupitt and Dr. Igor Khripunov, have prepared separate statements on the Chinese-Iranian and Russian-Iranian issues respectively. I ask that these reports also be entered into the record.

Senator BROWNBACK. Without objection.

[The information referred to appears in the appendix.]

Dr. BERTSCH. Finally, I am releasing two new University of Georgia Center reports. The first is entitled "Restraining the Spread of the Soviet Arsenal." The second is a special issue of our quarterly report, "The Monitor," on "Terrorism and Weapons of Mass Destruction." Both reports contain considerable research and reporting of relevance to your hearings today.

I am happy to make copies of both of these new reports available to you and your staff.

Senator BROWNBACK. Thank you. We would accept those and appreciate them.

Dr. BERTSCH. Last week, Secretary of Defense William Cohen, Senator Richard Lugar, Sam Nunn, Jim Woolsey, and others joined us at the University of Georgia to address the issues of terrorism, weapons of mass destruction, and U.S. security. All agreed that we are dealing with a major threat, that Iran is a critical problem, and that China and Russia are parts of the problem, and, I might add, can be important parts of the solution.

I commend you and your colleagues for keeping attention on these issues, for promoting a fuller understanding of the problem, and for reassessing what the United States can do and should do to address these problems. I read with interest the transcript of your April 17 hearing. The issues addressed there and at today's hearing are critical and require ongoing, long-term attention.

I appreciate Gary Milhollin and Seth Carus providing some of the details on these issues. I would like to address two questions briefly: what is happening, and what is and what can the United States do about it?

First is the Chinese, Russian, and Iranian connections. In order to assess what is happening, we have to understand how Russia and China view Iran and what they are doing or not doing to control strategic exports into the region.

First, as for Russia and Iran, you know and I know, but it is still important to remember, that Russia views Iran differently than does the United States. Although some informed Russian officials are aware of and concerned about the security threats emanating from Iran, most Russian officials view Iran as a neighbor with common economic, political, and security interests.

For example, many Russian officials consider Iran a valuable asset in resisting the northward influence of the Taliban religious forces in Afghanistan and as an ally in other regional security issues. Most see Russia as having a large stake in economic relations with Iran, including billions of dollars in oil and gas deals, military contracts, and nuclear energy projects.

While the United States sees much of this as the arming of Iran, Russia sees it as energy and economic cooperation with a close neighbor.

Although Russia is less sensitive to the security threat from Iran than is the United States, it is not oblivious to its national and international nonproliferation responsibilities and interests. On the nuclear issue, it intends to verify the peaceful uses of equipment supplied to Iran. It is attempting to further develop its nonproliferation export control system.

For example, in 1996, it approved two new sets of procedures that are intended to reduce proliferation risk. Government edicts numbers 574 and 575 were intended to enhance Russian controls on the export and import of nuclear materials, dual-use equipment, and related technology.

Furthermore, just last month, Russia and Iran signed a memorandum of understanding on export controls.

As I am suggesting and as my colleague, Dr. Khripunov, details in his statement submitted for the record, Russia wants to maintain close economic, political, and security relations with a neighbor. This does and will continue to raise legitimate security and proliferation concerns in the United States and West. We should be concerned and we should do everything possible to lessen the risk.

Keeping attention on these issues is critical and continuing to engage Russian officials at all levels about nonproliferation in the region is very, very important.

Now I believe it should be noted that the U.S. Government has done much to heighten proliferation concerns and bolster export control responsibilities in Russia and the other new states of the former Soviet Union. A committee of the National Research Council, a part of the U.S. Academy of Sciences on which I served, released 2 weeks ago this report, entitled "Proliferation Concerns." This report, I might note, gives high marks to U.S. governmental programs and efforts to promote nonproliferation export controls and policies in Russia and the other post soviet states.

Although much remains to be done, progress is being made. The United States is promoting, I think it is fair to say, more responsible, nonproliferation behavior in Russia and the other former Soviet states through its national security policy of engagement and enlargement.

Now I have a few words about China and Iran.

China is clearly not adequately concerned about the proliferation threat in Iran. It is interested in expanding its economic and political relations with Iran. It is seeking political favor, hard currency, and oil.

It views its relations with Iran as, and I quote, "Normal cooperation in peaceful areas." This is troubling for a number of reasons, including the following.

There are numerous strategic exports from China to Iran, some of which Gary Milhollin referred to, and of which members of this subcommittee are fully aware, that are reasons for proliferation concern. These exports raise doubts about Beijing's commitment to nonproliferation norms and their capacity to control the export of sensitive items from Chinese territory.

The U.S. Congress, executive agencies, and intelligence communities have responsibilities to follow these developments closely. U.S. Government officials should continue to express their concern to Chinese authorities.

Second, as my colleague, Dr. Cupitt, indicates in his statement for the record, China has much to do to develop more effective export controls. Our research at the University of Georgia shows that PRC export controls remain far from being complementary in practice to Western standards and to the systems of neighbors in its region, including Russia. Russia has a far stronger export control system than China.

At the same time, it is fair to report some positive developments in Chinese export controls. These include an improved legal framework, development of control lists, administrative regulations, and governmental structures to review and approve licenses, and, third, use of administrative sanctions to punish Chinese individuals and enterprises that have violated export control procedures.

Yet many problems in Chinese nonproliferation export controls exist. These include: (1) an overwhelming lack of export control knowledge and transparency; (2) suspicion that the United States, Japan, and others are pushing export control measures on China to undermine Chinese sovereignty and commercial interests; and (3) waning Chinese governmental control over industries and enterprises. This is placing immense pressures on their underdeveloped export control system.

Chinese strategic transfers to Iran and elsewhere are matters of significant U.S. concern. Washington should continue to engage Chinese leaders and officials at all levels on these issues and do all that they can to encourage and support the development of more effective export controls in China.

Finally, what about U.S. responses? There is much that the United States can do and is doing to address the arming of Iran. It has been vigilant and it has regularly raised its concerns with high level Russian and Chinese authorities. Its bilateral and multilateral nonproliferation efforts are important and their impact should not be underestimated.

For example, through U.S. influence, Ukraine pulled out of the Bushehr nuclear power project in Iran. And, while Russia remains unwilling to forego much of its nuclear cooperation with Iran, it has agreed to limit its scope and to be more vigilant.

The same can be true for China. Multilaterally, U.S. leadership has brought about a broad international consensus on the need to limit Iran's programs to develop weapons of mass destruction.

It has helped put multilateral nonproliferation export control regimes in place that have imposed serious obstacles for Iran. The Iranians are finding it increasingly difficult to acquire the WMD related equipment and technology that they want. The Chemical Weapons Convention outlaws any assistance to Iran's chemical weapons program. The Nuclear Suppliers Group and IAEA have created real impediments to Iran's nuclear weapons aspirations.

The Missile Technology Control Regime and the Wassenaar arrangement are doing the same in missile and conventional weapons areas.



Regrettably, some Chinese and Russian items that raise proliferation concerns are still flowing to Iran. We should do all that we can to persuade the Chinese and Russians to refrain from this. But I do not believe that sanctions on Russia and China now are the best instrument.

Considerable scientific research shows sanctions to be ineffective in most cases such as these. Sanctions are unlikely to change Chinese and Russian behavior in the specific Iranian case, and there are more effective ways to bring about their cooperation.

I believe the United States can convince the Chinese and Russians that the costs of arming Iran with nuclear or chemical weapons or increasing Iranian missile capabilities exceed the economic return resulting from the export of such items.

I am confident that the United States can make persuasive arguments that will demonstrate to the Chinese and Russians, as we have done with the Ukrainians, that their futures are brighter if they are part of an international consensus resisting the development of weapons of mass destruction in Iran.

In this environment, the United States can engage the Russians and Chinese further in improving their nonproliferation export control systems and in complying with the International Export Control Regimes.

Much has been accomplished with Russia in recent years. More remains to be done. Much more needs to be done with China. In a policy of engagement enlargement, U.S. pressure and encouragement will do more to tighten Chinese and Russian nonproliferation export controls than any sanctions are likely to do at this point.

In conclusion, I believe the United States should continue to lead and build an international consensus restraining WMD transfers to Iran. It should encourage Chinese and Russian participation in this consensus and responsibility in their behavior.

Finally, it should work with China, Russia, and other potential proliferants to build effective national export control systems and multilateral regimes that will insure that proliferation related transfers do not take place.

Thank you very much.

Senator BROWNBACK. Thank you very much, Dr. Bertsch. I appreciate your testimony and look forward to engaging you in questions as we look at this.

Dr. Carus, thank you very much for joining us and being with us in the committee. We can take your written statement, if you would like, or you can summarize, or you can present your written statement. The choice is yours and we welcome you to the committee.

**STATEMENT OF DR. W. SETH CARUS, VISITING FELLOW,  
NATIONAL DEFENSE UNIVERSITY, WASHINGTON, D.C.**

Dr. CARUS. Thank you very much. It is an honor to testify before this subcommittee.

I think there are very few issues of greater national security interest to the United States than Iran's acquisition of nuclear weapons.

Senator BROWNBACK. Would you get a little closer to the microphone and lower it a bit, please? Thank you. The microphone is pretty directional.

Dr. CARUS. Let me know if you can hear me now?

Senator FEINSTEIN. That's better. Thank you.

Dr. CARUS. There are very few issues of greater significance, national security significance, to the United States than Iran's efforts to acquire nuclear, biological, and chemical weapons. For that reason, I am grateful for this opportunity to present my views to the subcommittee.

Before continuing, let me note that my testimony does not necessarily reflect the views of the National Defense University where I am a Visiting Fellow or the Center for Naval Analyses, which is my home organization, or the Department of Defense. In addition, the comments I am going to make today summarize a presentation I prepared earlier this year for the Nixon Center for Peace and Freedom. With your permission, I will submit a copy of that paper for the record and will just focus on some key issues.

Senator BROWNBACK. Without objection, that will be put in the record.

[The information referred to appears in the appendix.]

Dr. CARUS. Specifically, I want to focus on four main issues to provide a somewhat broader framework for our national security concerns about what is going on with Iran.

The first thing is I think we have to continue to assign a high priority to countering Iranian efforts to acquire NBC armaments and the means to deliver them. The available evidence convincingly suggests that Iran wants to acquire such weapons. Moreover, it appears they are attempting to expand both the size and sophistication of their activities. As a result, I would agree with what the previous speakers have said, that we have to accord a very high priority to our efforts to constrain Iranian efforts.

In general, the United States has taken an appropriately hard line against Iran's activities. Despite the general weakening of export control policies by the United States and this administration, the imposition of sanctions specifically against Iran ensures that we maintain tighter controls on Iran than for other proliferation countries of concern.

Fortunately, there is little controversy about the need to take such steps. This policy has bipartisan support in this country that dates back to the early 1980's, when we first saw evidence of Iranian interest in resuming efforts to develop NBC capabilities.

Our allies, who generally do not support U.S. policies toward Iran, actually do agree in principle on the need to constrain Iran's weapons of mass destruction programs. Even Russia, which has been willing to supply sensitive technology to Iran, appears to accept in principle that we do not want Iran to acquire such capabilities.

The only real exceptions to the international consensus on constraining Iran are North Korea and China, which I think is a significant point.

Second, the most serious problem we face in constraining Iran's weapons programs is the support they receive from foreign individuals, organizations, and governments. Without such support, Iran

would be limited in the size and sophistication of its programs. With such support, they could potentially develop highly capable NBC weapons and pose a serious threat to the interests of the United States and its friends and allies in the region.

As a result, we must be willing to devote considerable political capital in our efforts to persuade other countries to limit their support for Iranian NBC activities.

The importance of external assistance to the success of the NBC and missile programs in Iran reflects the difficulties that Iran appears to face in developing indigenous weapons capabilities. Many of the most talented Iranian scientists and engineers left Iran at the time of the revolution, and efforts to convince such people to return to Iran have had limited success. Those remaining in Iran appear to lack the range of skills needed to support large-scale efforts to develop NBC weapons and missile delivery systems.

In addition, the Iranians have shown limited ability to manage large weapons development programs. In this regard, I believe it is significant that Iran has had to turn to North Korea for missile production technology. The SCUD type missiles that Iran is producing are relatively unsophisticated, and one would think that Iran would be able to produce them on its own.

The fact that the Iranians had to turn to a country as technologically backward as North Korea is a significant signal of the management problems that the Islamic Republic appears to face.

An additional problem with covert assistance is that it might make it difficult to ascertain the true capabilities of Iran's weapons programs. This is especially troubling with regard to Iran's nuclear weapons program since, if Iran acquires fissile material through covert purchases from existing stocks in a third country, Iran could hide its weapons capabilities since the fissile material will not necessarily present the kind of obvious signature of, say, a production facility.

As a result, we might have to treat Iran as a nuclear capable state if we discover that it has covertly acquired even a small quantity of fissile material since we may not be able to ascertain the true quantity involved.

It is for these reasons that we should worry about foreign assistance to Iran's NBC programs and their missile programs. Unfortunately, Iran has been able to receive extensive assistance in these areas from several suppliers, especially in the area of nuclear technology, including Russia, China, and North Korea. Moreover, Iran has considerable experience in developing overseas networks for the illicit acquisition of technologies and supplies.

In the past, the Iranians have been able to acquire equipment even out of U.S. military stockpiles so that we know they can evade even the tightest security in their acquisition efforts.

Finally, we should worry about the possibility that we may not know the full extent of Iranian successes in technology acquisition. Recent experience with Iraq has demonstrated the potential weaknesses of our proliferation intelligence.

Accordingly, the intelligence community needs to continue to treat Iran's weapons acquisition programs as one of our highest priorities.

Third, we should also not exaggerate the extent of Iran's accomplishments. While Iran has significantly enhanced its NBC capabilities since the end of the Iran-Iraq War, these capabilities do not yet pose a strategic threat to U.S. interests in the region. According to public statements by U.S. officials, Iran is years away from acquiring nuclear weapons. While Iran may possess a substantial chemical weapons inventory, we are also told that it includes agents like hydrogen cyanide, which are virtually ineffective.

Indeed, the fact that Iran has acquired agents like hydrogen cyanide suggest that it lacks the manufacturing infrastructure needed to produce more sophisticated agents and has to rely on agents that are normal byproducts of commercial chemical manufacturing.

Moreover, there is no reason to believe that the Iranian military has the expertise to effectively employ its chemical weapons. Given the limited employment of chemical agents attributed to the Iranians during the Iran-Iraq War, there is no reason to believe that the Iranians gained the operational experience at that time.

And, indeed, if we look at one recent report, where we have been told that Iran deployed chemical artillery rounds on the island of Abu Musa in the Persian Gulf, it appears to be extremely puzzling because the island is so small that it would be difficult to use artillery rounds against hostile military forces. While you could fire them against ships, it is not a very effective thing to do. It is so difficult to hit moving ships that most of the rounds would fall harmlessly into the water. You really don't get much compared with conventional weapons.

Now these comments are not offered to minimize our concerns about Iran's NBC capabilities. Clearly, we should be worried about what they are doing. But we do not want to impute to Iran capabilities they do not possess.

Indeed, to the extent that such weapons would be used by Iran to fulfill political objectives, actual possession may be less important to them than the appearance of possession. By imputing capabilities to Iran that they do not possess, we can actually provide Tehran with a tool that it can use in its efforts to coerce other countries in the region.

Accordingly, it is critical that we neither ignore nor exaggerate Iran's real capability.

Fourth, I think we have to realize that eliminating Iranian capabilities is going to take a long time. They are not going to disappear, even when the Islamic Republic finally disappears. While we may abhor and fear the Islamic Republic, these parts of these programs originated before the revolution, clearly in the case of the nuclear program.

Moreover, many of the concerns that probably motivate Iranian acquisition of NBC weapons are unlikely to disappear any time soon. Specifically, any Iranian regime is likely to desire such capabilities out of fear of Iraq, the country responsible for killing and maiming hundreds of thousands of Iranian soldiers and civilians.

In addition, insofar as all Iranians view possession of such weapons as a key indicator of Iran's status as an important regional power, the motivation to pursue such capabilities will remain.

We also cannot allow the Iranians to believe that by possessing NBC weapons they can deter the United States. We don't want

Iran's leaders to believe that NBC weapons can keep the United States from using military force against them, whatever the provocation. If we let them believe that, then we insure that Iran will remain committed to the possession of NBC weapons.

Only by convincing the Iranians that their weapons ultimately do not contribute to their national security will we be able to achieve the elimination of these capabilities.

Now what steps should the United States take to enhance our security and that of our friends and allies in the region? First, and I think this is really critical, we have to continue with the multilateral and unilateral efforts to constrain Iran's acquisition programs. Even if such steps create friction with other countries, they are an essential first element in any effort to curtail Iran's ambitions.

Let me diverge a little bit from my prepared testimony to recall our experience with the Rabta chemical plant in Libya. Back in 1989, it was reported in the press that a small German company was responsible for designing and managing the construction of this particular facility.

Even though the Government of Germany was fully aware that the United States had hard intelligence confirming this, German officials vehemently and officially denied that there was any possibility that a German company was involved. It was only by taking a hard stance and pressing the case that eventually the Germans were forced to admit that, in fact, German companies had been involved and to take steps to prosecute those involved.

I think the Rabta case is a good example of how it is possible to push the issue of illicit exports with a friendly country without ultimately disrupting our relations with that country but also without sacrificing either our principles or our national security interests. I think it is a lesson that this administration might do well to study carefully.

Unfortunately, I also do not believe that we are going to be able to solve the problem totally through export controls. It is something we have to do, but it is not guaranteed to resolve the problem. As a result, I think we also have to strengthen our military responses.

If the United States intends to operate in the Persian Gulf, we need to provide our military forces with the full range of counter proliferation tools being developed by the Department of Defense. This means developing missile defenses to counter Iran's ballistic missiles. It means improved chemical and biological defenses. It means improved counterforce capabilities to destroy NBC capabilities before they are used, even if the weapons are hidden in heavily protected bunkers. And it means strengthening our ability to detect NBC assets, even if Iran tries to hide them.

Finally, we must understand the extent to which Iran's NBC programs present the potential threat to our friends and allies in the region, especially the potentially vulnerable countries of the Gulf Cooperation Council.

The United States needs to develop an integrated policy of deterrence and reassurance. This means convincing the GCC that we will take whatever steps necessary to protect them from Iran's NBC weapons. It also means convincing them that we will take no actions that will unnecessarily expose them to Iranian retaliatory attacks.

If we take actions that frighten our allies to such an extent that they feel a need to distance themselves from the United States, we will have allowed the Iranians to win.

Ultimately, our success in the region depends on the extent to which our allies continue to rely upon us to enhance their security.

I will conclude with that remark.

Senator BROWNBACK. Thank you, Dr. Carus. I appreciate that.

Thank you all for your testimony.

Senator Feinstein, if you would not mind, I thought we would each have 7 minutes of questions and we will just bounce back and forth until we are done. I appreciate very much your joining the committee for this good panel.

Senator FEINSTEIN. Thank you.

Senator BROWNBACK. Let me start off.

We have sighted in on three nations, China, Russia, and North Korea. Does any of the three of you know of any other nations that are supplying weapons, either conventional or mass destruction weapons to the Iranians? Is any of the three of you familiar with any other nations or companies within those nations?

Dr. MILHOLLIN. I think you cannot disregard the export of dual-use equipment which is not specifically intended to be used for military purposes but which can be, if diverted.

Iraq is an example. Iraq built up its mass destruction capabilities with dual-use equipment, most of it from Germany but a lot from Switzerland, a lot from England, and it bought its electronics from us.

U.S. computers went into almost every known weapon of mass destruction site in Iraq. So to answer that question thoroughly, you would have to look at dual-use exports of sensitive equipment, controlled commodities, from Iran's main suppliers. And Iran's main supplier is Germany.

So if you really wanted to answer your question, you'd have to look at German exports to Iran.

I know that a few years ago, controlled commodities going to Iran from Germany were worth about \$1 billion a year. Now \$1 billion a year of controlled commodities is a lot of controlled commodities. You would have to build a lot of big buildings to hold that many machine tools.

I don't know what the numbers are recently, but I cannot believe that they are a lot lower than that.

Senator BROWNBACK. Dr. Milhollin, after the recent German court ruling, do you know, has there been any communication you have received or are aware of of a shift in that sort of policy of supplying from Germany?

Dr. MILHOLLIN. I am not aware of any. One can only hope that it might have had an effect. I don't want to label the Germans unfairly here, but the numbers are there and the policy is clear. The Germans do have a policy of constructive engagement toward Iran.

So if it were possible to look at the record of German exports, I think it would be a very interesting thing to do.

Senator BROWNBACK. Indeed, you suggest that we should be looking at our own exports and what has taken place there.

Dr. MILHOLLIN. I suggest that we look at our own exports.

You know, if you are building a nuclear weapon or you are building a long-range missile, 90 percent of what you need to do that is dual-use equipment. There are very few things that only have one purpose, machine tools being an example.

Senator BROWNBACK. Is there another comment?

Dr. Carus, please.

Dr. CARUS. May I make a comment to that? I think there is a lot of reason to be concerned about this dual-use category.

We know the Iranians have an extremely large acquisition network in Western Europe and I don't think we really know a great deal about what they do.

We know during the Iran-Iraq War that they were able to buy very sensitive military components globally. They were quite good at that.

As a result, one has to worry about what it is we don't know that this network is doing.

There have been some other examples that have come to light over the last few years where other countries have been involved in things that we would worry about here. For example, a few years ago, a facility in Switzerland was struck by an arson, done by somebody who apparently did not like the idea that a Swiss company was supplying what appeared to be a turnkey biological warfare facility to the Iranians.

Similarly, there have been concerns about exports by the Indians of chemical precursors that people worried would go into chemical weapons.

So, while the countries that I think we focus on as being the most egregious actors are clearly Russia, China, and North Korea, the Iranians are capable of operating globally and that compounds our problem.

Senator FEINSTEIN. What was that, please?

Dr. CARUS. I'm sorry. The Iranians are capable of operating globally. That means we cannot just afford to focus on the worst actors.

Senator BROWNBACK. Let me ask you this. On those three countries—and I do want to focus there because we have tied direct weaponry shipments from China, Russia, and North Korea to the Iranians and I think we should be looking at this dual-use technology. I appreciate your raising that. But of those three nations, how much is the government control of supplier companies, how extensive is that? I am hearing mixed statements from some of you. Some are saying it is extensive. Dr. Bertsch, you seem to suggest that the Chinese are a little too loose on that so that maybe, if I am interpreting your statement correctly, the Chinese are not actually agreeing to supply this equipment to the Iranians. It just sort of happens as a process of commercial business transaction in that they are not a bad actor here, it is just a loose system.

Dr. BERTSCH. Well, I think there is evidence both of state complicity, that is, where the Chinese or Russian Governments have permitted exports that we will disagree with in this country. In addition to that, because of the chaotic economic and political environment, particularly in Russia but also with emerging freedom to export in the changing Chinese economy, it is difficult for these state controlled bodies to make sure that nothing gets from individuals of enterprises on Russian and Chinese territory into Iran.

I mean, there is a terrible problem with corruption and smuggling in both of these countries. The most important thing that could be done to help cut down on the possibility for smuggling is for healthy economies and stable governments. That is why it is so important that Russia stabilize its economic/political situation and why China not allow things to go out of control.

But this is complicated. It requires a lot of good intelligence both from governmental and nongovernmental researchers to try to piece this together.

I would say the United States ought to keep the pressure on both state decisions and where, states do not have control, over their private entrepreneurs that exist both in China and Russia, and "private" in the sense of the new entrepreneurs who are out there who want to make money.

Senator BROWNBACK. Thank you.

Senator Feinstein, I am glad you could join us.

Senator FEINSTEIN. Thank you, Mr. Chairman. That was very interesting and I very much appreciate the comments of the three gentlemen.

I would like to talk for a moment about our export controls. Dr. Milhollin, as you pointed out, many of the things on your list attached to your comments are off-the-shelf, dual-use, computer related technologies. I come from a state, California, which is a big producer of a lot of these technologies and which generates a lot of pressure to ease our export controls.

I particularly ran into this in the MTCR discussion. Hughes had three major communication satellites involving encryption for commercial purposes in China that got caught up in this. Of course, the Germans were right there, ready to sell these same satellites to the Chinese.

The question I have for all of you is what should we do to toughen our export controls and, at the same time, to develop a situation where one of our allies is not simply going to move in and replace these sales, which, to me, seems to be the case today.

Dr. BERTSCH. I feel very strongly about this issue, and if I can jump in first, I think it is a very good question.

We have been studying U.S. export control policies for 20 years at the University of Georgia. I think if there is one thing we have learned—and that is to respond to your very important question what can we do to be tough but not allow Germans, Japanese, or others to go in and get these deals—I think we have to continue to work multilaterally with these countries, to say to Germany, Japan, and others listen, we are following your export policy very carefully and we will just not tolerate it when we deny an export to a country for proliferation reasons and you go in. A lot of that has gone on in the cold war and even into the post cold war period.

But I would give the United States high marks—the Bush Administration, the Clinton Administration—on really pressing this case, to make sure that not only Germany and Japan are on board—and I think they are; I think by and large we have a very effective multilateral consensus on this—but the new challenge in the post cold war period is to bring Russia and China on board. Then we will not be dealing with this kind of issue today.



I think we have made tremendous progress in the last 3 or 4 years to get Russia on board with the United States, Germany, and Japan. Now we have to keep them on board. The Ukrainians are a little more on board. That is why they pulled out of this nuclear project, Bushehr, in Iran. Now we have to bring China in. We are only just beginning.

We have begun in our program discussions with the Defense Department here in Washington, and the State Department and Commerce Department about how we can do more to bring about the cooperation that we need from China.

I am optimistic that, while it won't happen overnight, it can be done.

Senator FEINSTEIN. Thank you.

Dr. Milhollin?

Dr. MILHOLLIN. You will get a somewhat different response from me and less optimistic, probably.

First of all, I think you need to look at export controls with the perspective of how important they are and why we have them. The amount of goods controlled now is about \$10 billion a year. If you do the arithmetic, you will see that that is a fraction of 1 percent of our economy, a fraction of 1 percent.

The total amount denied—I'm sorry. Of the amount controlled, 98 percent of that is approved. That is, if you control this really economically minuscule amount of technology for exports, you make people get licenses, 98 percent of the licenses applied for are granted, or only 2 percent are turned down.

Senator FEINSTEIN. Are you saying the controls are tough enough, that it is just the administration of the controls?

Dr. MILHOLLIN. I am saying that the idea that we are hurting our economy or cutting jobs in order to have export controls is wrong. There is no way you can measure the insignificant impact on our economy of export controls. But the impact of the controls on our security is very high because an instrument that may not cost very much can really enable somebody else to move a program forward rapidly.

So that is why it makes sense to control exports.

The first point is that it is not really a jobs issue. There is no measurement sensitive enough to measure the jobs impact of our export controls. I think it is about 4 percent of 1 percent of our economy that is even controlled. The total amount denied, the last time I looked at it, was about half the cost of a single B-2 bomber.

That is what we are talking about in terms of denied technology, the worth of it. It is insignificant.

The second point is that it makes sense to have unilateral controls for a number of reasons. First is just an ethical reason.

The United States is the only country I think that controls the export of torture equipment—thumb screws, that sort of thing. If you want to sell torture equipment, you have to get a license in the United States.

Now it is true, theoretically, that other countries could rush in and sell these torture devices that we are not selling. It is also true that we don't sell missiles, for example, to Iran, or to Syria. Other people do. They get the missiles anyway. Our guys, our people, lose out on the sales of these missiles.

We make better missiles than the North Koreans. We could supply the Iranian market. We make better chemical weapons plants than anybody. We could put those in Libya, but we don't. The Germans got the business.

I don't hear anybody complaining that our industry missed out on the two chemical weapon plants that Libya is building.

The third reason it is important to have unilateral controls is leadership. The way it really works internationally is somebody has to step out and do it first, and be the leader, and have international controls, and other people join. That is what we did in Iraq.

If we had waited until everybody, all of our allies had agreed what to do about Iraq, we would still be talking. So you have to have unilateral controls.

To make export controls stronger, we need to stop cutting them. The Clinton Administration's export controls are a tenth of what we controlled under President Bush. I think we have cut it down to the bone and we are going into the bone. We need to stop.

Senator FEINSTEIN. Thank you.

Thank you, Mr. Chairman.

Senator BROWNBACK. Thank you, Senator.

Let me look now at China and Russia. Dr. Bertsch, you are saying we should continue and increase pressure there to try to bring them into the kind of "league of nations" in dealing with the Iranians.

Dr. Milhollin, I am certain you would agree with that statement as well, that we need to focus a lot there. Dr. Carus, is that correct, as well? Russian and Chinese exports are our clearest present danger on arming further the Iranians, conventional and mass destruction as a present issue.

Dr. CARUS. I think there are several reasons to focus on those two countries. One is they have the largest capacity to supply the kinds of things that Iran wants of all the potential supplier countries out there.

For the kinds of reasons that Gary Milhollin just mentioned, people in most countries will not sell Iran a complete chemical weapons factory. Unfortunately, there are people in China who are willing to supply them with such facilities.

Senator BROWNBACK. And then the directions on how to put them together.

Dr. CARUS. That's correct.

While I have a little bit of optimism that national interest concerns will lead the Russians to be somewhat constrained, I am less optimistic about the Chinese. The history is just not very comforting in this regard.

Again, dredging up a little bit of ancient history, if you recall back in 1987-1988, the United States was busy fighting a little mini-war with Iran in the Persian Gulf. Remarkably, the Chinese, who apparently considered themselves a friend of the United States, were selling the Iranians anti-ship cruise missiles at that same time. So they were perfectly willing to supply weapons that they knew had the objective of sinking American ships at a very critical point in time. And, while we demarched the Chinese over this, it did not matter to them.

I am not sure things have changed that much in the intervening decade.

Senator BROWNBACK. Well, I am not sure that they have changed that much, either, particularly—and I can direct your focus on the charts and the boards that we have up here— from what we know has gone to Iran and from which countries, and with no sanctions then involved toward those suppliers. I mean, this is known, unclassified information.

Dr. Milhollin, you cited specific examples. And yet, we have not stepped up to do anything further.

Now what is it we should be doing? What further should we do, particularly toward the Chinese and the Russians, to cause them to stop this arming of the Iranians?

Dr. Milhollin, please?

Dr. MILHOLLIN. Well, I think the first thing we could do is just implement our own law. We do have laws on the books.

Senator BROWNBACK. And your contention is those have not been implemented?

Dr. MILHOLLIN. Yes. I think it is clear that they are not being implemented today.

The State Department is basically admitting that the Chinese are continuing to supply Iran with chemical weapon technology. They somehow have convinced themselves that the evidence is not sufficient. Well, it is sufficient. The studies are done. They are adequate.

What we have is just a policy at the top of continuing to pursue trade at the expense of national security. And until the White House changes its view on that, I think we won't get any progress in implementing the laws that exist.

Senator BROWNBACK. Now if the White House will not implement these laws, should we tighten them further to not allow loopholes and to simply state if this occurs, this sanction will happen?

Dr. MILHOLLIN. I think the Congress ought to consider that very seriously. Also, I think the Congress ought to look at the whole group of sanctions laws.

There have been so many sanctions laws passed, sort of ad hoc, that if you try to make a big chart of all the sanctions laws, it is a redoubtable task.

Chemical sanctions, for example, are not very strong; that is, even if we sanctioned the Chinese for chemical weapon proliferation, what are the penalties? The companies cannot sell things to the U.S. Government. How much does the U.S. Government buy from Chinese chemical companies? Nothing. They cannot import into the United States or export to the United States from China. That is not a serious penalty.

I think we have to look at making the penalties more severe and changing the triggering mechanism so that it is more automatic. But that is going to take dissecting the present labyrinth of sanctions laws and putting them back together in a more rational form.

Senator BROWNBACK. Dr. Carus, would you agree with that statement, that they need to be tightened and made more specific and workable if they are not currently?

Dr. CARUS. Unfortunately, I think the ultimate problem is the intent of whatever administration is in government at the time.

I think this is demonstrated most starkly if you look at what happened in the case of Pakistan with the M-11 missiles. If the U.S. Government had said officially that Pakistan had received M-11 missiles from China, we would have had to impose sanctions.

What happens in those cases is everybody knew the M-11 missiles went to Pakistan. But because of the implications of that decision, the intelligence process was corrupted. And, as you followed in the press, somehow there was never a determination that those missiles had ever gone there. And my suspicion is effectively there never will be, even if you were able to walk up to one, open it up, and see that it is a missile. This is simply because if the executive branch decides that they do not want to impose sanctions, they will start corrupting the intelligence process to make sure there is never a determination that some egregious event has happened.

Senator BROWNBACK. Do you have to somehow design the law such that the determination is not built or cannot be corrupted by corrupting the intelligence system?

Dr. CARUS. If there is a way to do it, it certainly would be essential in the process.

Senator BROWNBACK. Dr. Bertsch, I want to make sure to get you in on this. I gather from your testimony that this is not the way to go; that we need to get Russia and China in, but that the current route is the route you would prefer to continue.

But I want to challenge you on that. This current route has produced substantial weaponry going to the Iranians from those two nations.

Dr. BERTSCH. It has, Senator. You are right, and I think we should all be concerned with that.

However, in the absence of the present U.S. policy, to which I give high marks, I think the problem would be much worse.

I think we are fortunate that we have not seen more transfers, and I say the reason why is a relatively effective U.S. policy. I think we should not underestimate how effective the U.S. Government is with U.S. congressional leadership, in putting together a set of policies, and you have listed many of them on the board. I also think that when we think about new and tougher sanctions, and we should do that, we have to recognize that many of our close allies, not to mention Russia and China, look at their relations with other countries differently because they are neighbors and because they feel that economic and technological cooperation is in their national interest.

They would also say that they think more of this is peaceful cooperation. I think we have to continue to question and do our intelligence work so that we know exactly what is peaceful and what is not peaceful.

But I think that our most effective policy involves sanctions but in a multilateral way, where we are not the only ones imposing them. We need to have the Germans, the Japanese, and ideally the Russians and the Chinese on board. I think we are making some progress on that.

Just let me conclude by saying that sometimes during the cold war years, we lost the cooperation of some of our allies and things went too easily from countries like Germany to Iran, or even to the Soviet Union at that time. Where we have been more effective is

where we can go to a country like Iran and say there is a broad international consensus that your efforts to develop weapons of mass destruction are going to be very costly to you and we want you to recognize that this is not just the United States unilaterally imposing very tough sanctions that make us feel good but may not be as effective in terms of the final goal of stopping WMD programs in Iran.

Dr. MILHOLLIN. Could I respond to that?

Senator BROWNBACK. Dr. Milhollin.

Dr. MILHOLLIN. I think history teaches the opposite. If you talk to Japanese export control officials, they say that export control in Japan is divided into two epochs—before Toshiba and after Toshiba. The sight of U.S. Members of Congress destroying radios on the Capitol steps deeply shocked the Japanese, and they changed their export laws.

I have talked to the Japanese regularly, and, believe me, they have not forgotten that incident.

If you talk to the Germans about export controls—and I talk to them, too—they say that the universe is divided into two epochs: before Rabta and after Rabta. Their company, Imhausen, was nailed publicly on television in Germany and in the U.S. media as supplying, willfully, the chemical weapon plant to Libya despite U.S. objections.

That only changed, that is, the big disaster only befell the Germans when it all got into the newspapers and it was in “Der Spiegel” every week, and it was all over German television. Finally, the Germans were humiliated publicly, and they caved and changed their export laws.

That’s what it took in those two cases.

The English are now going through the same experience. It is called Matrix Churchill. The British say well, there is before Matrix Churchill and after Matrix Churchill. Matrix Churchill was a large machine tool scandal that has just been the subject of an investigation and a long report in England. The folks who regulate export controls are still under the immediate shock of that experience.

So from my perspective, and I have been following this very closely and working hard on convincing other countries to do better, it takes a lot to get people to change their practices. But it can be done. But it needs confrontation very often in order to overcome the really very strong and consistent motive for a profit.

Senator BROWNBACK. Yes.

Senator Feinstein.

Senator FEINSTEIN. Just following along, Mr. Chairman, it takes not only confrontation, I think it takes transparency. I wanted to ask about two things, one being the United Nations and the second China.

I thought one of the best things that President Bush did was to begin that effort for increased transparency in the sale of arms in the United Nations. As you gentlemen know, he had great success. I think the vote was 150 to nothing in the General Assembly. Then, of course, the F-16’s were sold to Taiwan and China vetoed this effort in the Security Council. So it ended up going nowhere.

I have asked both Secretary Christopher and Secretary Albright, and I think this is really worthy of an effort to pursue in the United Nations, to get that kind of multilateral alliance that you gentlemen were speaking about.

With respect to China, China originally denied that it had sent the 3 dozen or so M-11's to Pakistan. I happen to believe they were sent. But, nonetheless, there was to be a second load which has never gone, to the best of my knowledge.

I think that when China knew that we knew, it triggered some action on the part of Beijing.

Then we got into the ring magnet situation, \$75,000 worth of ring magnets, which are not complicated things. But apparently—and I tend to believe this—some of the ministries in China really operate in a much more uncontrolled and unsupervised way than the world would like to believe they do, and a lot of these transfers can take place really without Beijing's full knowledge.

Do you find any substance in that? Could you inform us what is the extent of governmental controls over supplier companies in Russia, China, and North Korea? I am talking about individual sales now. And at which level of the national government are these controls exercised?

Dr. BERTSCH. I will begin, if you would like, Senator.

I think you are absolutely right. That transparency is a very important element to effective export controls and nonproliferation, and that we should insist on it. If countries can be too secretive, it will be very costly in terms of our nonproliferation goals.

Let me remark first on Russia which I know the best. We have had our researchers on the ground there for some years. We have a lot of exchange with Russian export control officials, both trying to understand better what is going on there and also trying to assist them in cooperation with the U.S. Government in developing their export controls.

One of the bits of good news is that we, in the U.S. Government, have launched an industrial outreach program into Russian military-industrial enterprises to bring about more export control compliance.

With the export imperatives in Russia today, there is the possibility that these enterprises will export things and try to ignore what Moscow and the government wants them to do. We feel it is very important that, like American firms who are very well informed, as in California, about U.S. export control laws, Russian firms must be so equally well informed.

I think the Russians and America, Russia, and other countries are working to make sure that Russian industry follows international and national law. However, in a country as large as Russia, with the military-industrial complex of the size they have, this will be an ongoing challenge.

We have found even in America that, on occasion, some of our firms will export something that is counter to U.S. law and restrictions and they get into trouble. We want to see more of these firms in Russia getting in trouble.

We know much less about China, but my colleague Richard Cupitt, who has prepared a separate statement that we have entered into the record, has been in China talking with government

officials, talking with industry and nongovernmental groups to get to the bottom of this.

We think there is a lot that we ought to know more about, and the U.S. Government and the Chinese Government first and foremost can be concerned with it. Our feeling is that we could probably bring about greater Chinese compliance if we could say to the government we know that you, government officials in China, are concerned about some of the things that your enterprises are doing.

They sometimes feel in Beijing that they are losing control over the provinces and the economic zones, and we can say to them look, we have been dealing with the same problem in the privatized American economy for decades and why don't we share our expertise as we are doing with the Russians so that we can work together.

We learn from one another. We learn more about what they are doing and not doing when we engage them, anyway.

North Korea is the worst case, of course, because we have no real knowledge of what is going on there. Fortunately, they do not have the export capabilities and the military-industrial equipment and weapons systems that will have as big an impact as Russia and China.

Senator FEINSTEIN. Thank you.

Dr. Milhollin?

Dr. MILHOLLIN. I would say that lack of government control over people and things has not really been thought of as a big problem in China—yet. Maybe we should start a rumor that dissidents have infiltrated China's export corporations. Then there would be total control overnight.

I think the problem in China is not lack of control, it is a problem of corruption at high levels. People are making money out of these exports who control these corporations from the top.

The Chinese companies that are in our data base and that we have talked about are state controlled companies.

Senator FEINSTEIN. May I stop you right there?

Dr. MILHOLLIN. Sure.

Senator FEINSTEIN. Let me ask you something. Let's take Pakistan.

I happen to believe that the Chinese have helped them develop an indigenous nuclear capability by enriching uranium above the 5 percent level.

Dr. MILHOLLIN. Without a doubt.

Senator FEINSTEIN. Having said that, it would just seem to me that China at some point has to realize that having two competing indigenous nuclear powers, India and Pakistan, right over their border is not in their national interest.

Dr. MILHOLLIN. I don't think China sees it that way. For many years, China has used Pakistan as its window on the world. That costs a certain amount.

Also, China has received the reactor order from Pakistan. It is building a couple of power reactors which are quite valuable.

You know, you mentioned the ring magnets. The ring magnets follow a pattern. They are what are called "sweeteners." They are little things that you would not export by themselves because they are very sensitive and they get you in a lot of trouble. But what

you do is you throw them into a larger deal. That happens all the time.

If you look at the Russian deal with Iran, the enrichment plant, the natural uranium, the little research reactor, these are all things that are not very valuable on their own. But when you are bargaining for a couple of big power reactors, you want the sweeteners.

It is very hard not to provide the sweeteners.

So getting back to your question, I think that explains the ring magnets. They don't make sense by themselves. But as part of this relationship and as part of a big transfer of power reactor technology, they make sense.

So China still uses Pakistan as a window on the world and that costs a certain amount. And China is willing to pay that.

I don't think China is concerned about India's program. India cannot threaten China now and it never has been able to threaten China. And India is not doing the things that would be necessary to really threaten China in the future. It does not have an active testing program. It is not pushing its intermediate range missile. India is not a threat to China.

Senator FEINSTEIN. No, I didn't mean to imply that. But with the India-Pakistan situation, the nondeployment of the Prithvi missile, for example, our sale of some of the missiles that could be carried on the plane which is part of the leftover package of arms for Pakistan, that is potentially a very dangerous situation between the two of them.

Dr. MILHOLLIN. It is. But the Pakistanis are in a reaction position with respect to India. India is much stronger conventionally. India has a stronger economy. The Pakistanis are always a step behind. They are always trying to catch up and they are always trying to maintain some kind of balance with India.

The first place they go when they get into trouble is to the Chinese. Up to now, the pattern has been that the Chinese have helped them, and I don't see this changing.

Senator FEINSTEIN. Thank you.

Senator BROWNBACK. If I could, there are a number of people in Congress who would say we have bad actors in China, clearly in the government, and in the private sector. So let's just terminate MFN because it is too difficult to get at the specific company or the specific group that is providing weaponry to the Iranians.

I happen to really question that way to go at it. But answer me this—and I am not sure who would be appropriate for this. Can we target the specific company in China or the extension of the government if it is that case that is providing weaponry to the Iranians? Can we get in with that narrow specific?

You have given several examples, Dr. Milhollin. Will we be able to do that or will they shift it just to another shell company before exporting it?

Dr. MILHOLLIN. I think you could target specific companies. The China National Nuclear Corporation is not going away. It is going to be the source of nuclear technology for a long time in China. It is going to be the entity that cooperates with us.

I think if you are convinced that they are continuing to help Pakistan, you can easily sanction that company. And many of the



other companies that we have mentioned here are big, established companies. They have sales networks. It would be hard for them just to suddenly become something else.

If you imagine McDonnell Douglas suddenly becoming some other company overnight, it is possible but there would be a cost.

So by sanctioning those companies, we could impose a significant cost on them.

Senator BROWNBACK. And do you think that would be an appropriate step to take?

Dr. MILHOLLIN. I think it would. If the company is willing to defy the world and supply a country we consider as a threat to us and as a rogue, then I think we should basically blacklist them and just not deal with them—not export to them, not import from them—and do everything we can to discourage their behavior.

Senator BROWNBACK. Dr. Milhollin, you have provided a list of a number of those companies in your specific examples. Is that an all-inclusive list, or are there others that you believe we should blackball in our dealing with them?

Dr. MILHOLLIN. No. I think this is just, to invent a metaphor, the tip of the iceberg here.

There are lots of other companies which I could provide to the committee.

Senator BROWNBACK. I wish you would. What I would like to see us do is to target in specifically on the bad actors in those nations, and particularly as we are approaching, again, the China MFN debate, let's focus in and narrow in on that specific company that is providing this sort of weaponry or technology to the Iranians.

So if you could provide that to us really as soon as possible, it would be most appreciated.

[The information referred to appears in the appendix.]

Senator BROWNBACK. I don't know if either of the other gentlemen would care to comment on this issue of narrowing in on the specific company and bad actor.

Dr. BERTSCH. I think there is value in that, and I think that sanctions should be focused and targeted on those most responsible.

I caution sanctions imposed on Russia and China of the MFN character because we have to remember that we have much larger security and strategic interests with these countries. We are working with Russia right now on getting through this difficult NATO negotiation, and if we were to impose sanctions of a broad sort or withdraw MFN from them, in a way that would jeopardize our larger strategic interests. It would be very, very costly.

I think that there are better ways of working on these proliferation leaks and transfers, both in Russia and in China, than imposing broad-scale economic sanctions on either of these countries.

Senator BROWNBACK. And you believe it to be doable as well, that we could target in on that company, and you would support such a policy that did target in and, if I could use the term, essentially blackball a company?

Dr. BERTSCH. I think so. I think in some cases that is justified.

Senator BROWNBACK. Dr. Carus?

Dr. CARUS. Let me make two comments. In general, I am very suspicious of sanctions that Congress imposes on the executive

branch simply because you get a corruption of the process, as I described in the case of the Pakistan missiles, the administration never admits the truth of what has happened.

Having said that, unfortunately, sometimes the only tools you have available in terms of a dialog with an administration are very blunt instruments. I think the history on export controls has been that administrations have only reacted when Congress has raised enough of a fuss that the administration has been forced to take seriously things that they would rather ignore.

Senator BROWNBACK. That is what we are trying to do here, raise enough of a fuss.

Dr. CARUS. So having said that I am not particularly fond of sanctions, under some circumstances, and I think we are in that kind of situation today, it is the only option available and should be pursued.

I think from this point of view, making it as targeted as possible is the right way to go. Hopefully, the result would be a dialog with the executive branch that would lead to perhaps a modification in policy.

If you recall, in the early days of the Bush Administration, it was willing to let Iraq buy just about anything. By the end of its term, they had a much different view on things. But, it didn't just happen overnight. It happened over time because of pressure on the administration.

Senator BROWNBACK. Senator Feinstein.

Senator FEINSTEIN. It would seem to me that if we were to follow this course, then we would also have to apply the same standards to Germany or the same standards to Russia and really do it across the board to make it meaningful—not select one country and impose a pinpointed sanction, but, really, all of those businesses and corporations that do this kind of thing with impunity.

Would you not agree?

Dr. MILHOLLIN. I would certainly agree. It is always more awkward, of course, to impose a sanction on a close ally. But if the case is clear, as it was in the Imhausen case for Rabta, then the world is better off if you take a strong position.

I think that case shows that to be true.

Senator FEINSTEIN. Let me ask this question.

Iran is a member of the Nuclear Nonproliferation Treaty and IAEA inspections have never turned up any prohibited activity. Nonetheless, everyone is certain that Iran is pursuing nuclear weapons.

Iran has also signed, although not yet ratified, the Chemical Weapons Convention, and we believe Iran has a chemical weapons program. What should we do in this situation about a state like Iran, that is a member of arms control treaties, that passes inspections, but that we believe is cheating? If we cannot prove it, how do we get other nations to join us in combating it?

Dr. CARUS. Senator, if I may respond to that, I think we are actually relatively fortunate in that in the broad outlines I think most of our friends agree with us on this.

If you look at the nuclear issue, it is true that nobody has ever found a violation of IAEA safeguards in Iran. Yet we have now, essentially, a 15 year track record of convincing other governments

that it would be a bad idea to support Iranian nuclear development programs. So, for example, back in the early 1980's, when the Revolutionary Government wanted to resume building the Bushehr reactors, we convinced the Germans not to do it.

Over the years we have approached many governments and convinced them that it would be a bad idea. So, in fact, I think in this particular case we are quite fortunate that most governments accept our arguments and, in fact, are concerned about what Iran might do. This gives us a real leg up in the case of Iran.

Unfortunately, there are a few major exceptions, and we have been focusing on them today.

Senator FEINSTEIN. May I ask you gentlemen to also provide the subcommittee with any lists of the sales, with specificity as to the companies or corporations in both Germany and Russia as well?

Senator BROWNBAC. Anywhere around the world, actually, if you would not mind.

Senator FEINSTEIN. That would be just fine.

Senator BROWNBAC. Let's say if you know of bad actors in this, let's get at it.

[The information referred to appears in the appendix.]

Senator BROWNBAC. Have you anything further, Senator Feinstein?

Senator FEINSTEIN. Yes. Let me just ask you a status question. Last year, we all had concern that China was going to proceed with a nuclear enrichment facility in Iran. To my knowledge, that has not taken place.

Do you have any information about this proposed sale? Do you have any information as to why it has not gone forward? Is Iran's inability to pay the reason, or has China really decided it would be a better idea not to go ahead?

What is the status of the proposed sale of the two nuclear reactors to Iran?

Dr. MILHOLLIN. Are you speaking of the Chinese reactors?

Senator FEINSTEIN. Yes.

Dr. MILHOLLIN. If I could start, my impression is that the Chinese arrangements with Iran are in a state of suspension at this time pending the outcome of Iran's hope that it will be able—I'm sorry. Let me start over.

China's sale of the hexafluoride plant and China's sale of research reactors and so forth to Iran seems to be in a state of suspension pending the outcome of our talks with China about the nuclear cooperation agreement with the United States.

I think the Chinese recognize that if tomorrow they announce that the hexafluoride plant was going forward, there would be no hope of an agreement with us.

So as I said in my testimony, I think it is sort of a gentle form of blackmail. The Chinese supply pipeline is in a state of remission at the moment, awaiting the outcome of our discussions with them. That is my impression of what the status is today of the nuclear cooperation between China and Iran.

Senator FEINSTEIN. Does anyone have any other comments on that?

Dr. BERTSCH. I don't think I really have anything to add beyond that and what was discussed at the April 17 hearing. But it can

be viewed as a policy of blackmail, although it also can be viewed as a policy of U.S. influence on China, that if this opportunity for expanded cooperation with the United States on the nuclear front, China-U.S., keeps this deal in a state of suspense, then we are serving our nonproliferation objectives.

Senator FEINSTEIN. I have two other questions.

Last year, Congress passed and the President signed the Iran-Libya Oil Sanctions Act which requires sanctions against foreign companies that invest more than \$40 million in Iran's oil and gas industry.

How effective has this law been in depriving Iran of funds generated by these oil and gas development contracts?

How much hard currency would you estimate Iran has lost so far and are there companies who have invested in Iran's oil and gas sector despite the threat of U.S. sanctions?

Have we imposed any sanctions against any of them? How effective a tool do you believe this law is in preventing proliferation in Iran?

I am sorry there are so many questions in one.

Dr. CARUS. Senator, I do not consider myself an expert on these issues, but I have followed them. My sense is that the law and the U.S. pressure has been quite effective. They made what appeared to be an already very unpromising market and made it even less attractive for doing business.

If you look at the cases that have taken place, such as Total's oil deal, the impression outsiders have is that because the gas produced cannot be sold into the UAE, that it is a money losing proposition for Total.

There are some other companies that are looking to get into Iran, including a Malaysian company. But these are small actors that cannot bring Iran the technology and the resources they need.

Given that the Iranians need to spend an enormous amount of money in their energy sector in order just to meet domestic demand, if you consider sanctions as one of several negative factors that are facing them, I think it has had an important contribution.

Clearly, to the extent that the Iranians do not get alternative sources of resources to pay for infrastructure, it means that it is money that they do not have for their NBC acquisition program.

Dr. MILHOLLIN. I just have one comment on that.

It seems to me that the United States has two, big, important, strategic assets. One of them is our market. Everybody wants access to it. I think we should withhold it from folks who do not merit access. And if you force them to choose between access to the U.S. market and access to the market of selling a few missiles and chemical weapon plans here and there, the choice will always be the U.S. market.

Second, we have high technology, which everybody wants. I think we should also restrict that to companies and countries that we can rely on, that share our values.

Senator FEINSTEIN. Those are two good points. I agree.

Doctor, do you have any comment on that?

Dr. BERTSCH. No.

Senator FEINSTEIN. Let me ask—I'm sorry. My red light is on.

Senator BROWNBACK. I was just going to wrap up the hearing. So if you have another, please ask it.

Senator FEINSTEIN. I just have one more question about Europe.

Senator BROWNBACK. Please go ahead.

Senator FEINSTEIN. The EU has insisted on conducting what they have called a "critical dialog" with Iran despite United States efforts to get EU nations to isolate Iran.

In the wake of last month's German court decision, which held that senior Iranian officials were responsible for the Mykonos bombing that killed three Iranian dissidents in Berlin in 1992, the EU has suspended its critical dialog.

What do you think the significance of this decision is? How much has this dialog hindered our efforts to isolate Iran? How much of a difference can the new EU policy make? Can we expect more vigorous European efforts to isolate Iran or combat its use of terrorism and weapons of mass destruction?

Dr. BERTSCH. I would not expect too big a change in European policy. I suspect that they are committed to their basic policy of dialog and that this will go on, and that these temporary developments are rather temporary.

Senator FEINSTEIN. I don't mean to interrupt you, but the problem I have is this is deeply troubling to me. If our European allies, for whom we maintain NATO, with whom we have this close relationship, won't support these policies, the effect of that is to subvert them. I think that is a major problem.

I happen to agree with what Dr. Milhollin said. But if Europe won't provide the kind of support we need and will just simply move in behind and sell some of these products, then our efforts are somewhat wasted.

Dr. BERTSCH. I agree, Senator. We have had a good bit of problem with our European allies for some decades. But by and large, they listen to the United States and they will work with us.

I think that over a period of time, they are going to make their own judgments about the terrorist threats emanating from Iran.

I think this recent case in Germany helped better inform the German public and German officials, and I think will make it easier to work with our German and European allies.

At the same time, they look at economic cooperation and political relations with countries such as Iran somewhat differently than we do. We have to deal with that. We don't always like it, but I think we cannot underestimate the value of trying to bring a cooperative front with our European allies and bringing other countries, as well, into it.

Dr. MILHOLLIN. Senator, I would say that this court decision has just produced a very strong shot of what you said was good and necessary, which is transparency.

The public all know now that the Iranians are perfectly capable of doing what the court said they did. I think that to influence the Europeans over time on the subject of supplying Iran, we have to start using the policy we used with respect to Libya and the Imhausen case, which I mentioned before.

Our intelligence agencies know which German companies are selling what to Iran. We, I think—I hate to say this—but I think, until we start putting that out in the media, as we did in the case

of the Libyan poison gas plant, we are not going to create the kind of public pressure that is necessary in order to change the behavior of the European companies.

But I promise you that if our intelligence agencies did put out what they know about what is going into Iran, it would change behavior. It is just, I guess, that the powers that be have decided that the diplomatic cost is not worth it. So we don't see this information coming out.

Senator FEINSTEIN. If you send it to us, we can put it out.

Senator BROWNBACK. Yes.

Thank you all very much. I appreciate the panel and those who have participated, and Senator Feinstein for her excellent questions and participation in this hearing. I appreciate that a great deal.

It strikes me that we may have a moment here where we can step up the focus and the pressure on those who are supplying the Iranians, who many have identified as our erstwhile present danger that we have in the world, and that we can do something of a targeted, specific, and efficient and effective measure. The German court ruling I think is a part of that. With the desires here on Capitol Hill, our relationships with Russia and China, the upcoming China MFN debate, we may have a moment where we can step forward and hopefully do something good and constructive on this.

Thank you all for your attendance.

We are adjourned.

[Whereupon, at 11:50 a.m., the subcommittee adjourned.]



## APPENDIX

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### Prepared Statement of Leonard S. Spector

It is an honor to testify before the committee this afternoon on U.S. efforts to halt weapon of mass destruction (WMD) and missile programs in Iran.

Iran's growing capabilities in these spheres already pose a grave risk to U.S. allies and U.S. forces in the Persian Gulf region, but this threat could greatly worsen in coming years, as Iran graduates to even more potent weapons than it currently possesses, enlarges its missile arsenal, builds longer-range systems, and learns to mate its weapons of mass destruction with these advanced delivery systems.

As an independent observer who has not had access to classified information on these issues, it is possible for me to offer only a rough appreciation of the status of Iran's military programs and of U.S. efforts to constrain them. Nonetheless, using published reports and statements of U.S. and foreign officials, it is possible to develop a framework for assessing the successes and failures of U.S. policy. I hope the Committee will be able to employ this framework as it evaluates the more complete information at its disposal.

The United States has many instruments in its tool kit to fight the spread of WMD and advanced delivery systems. These include:

- building and sustaining international non-proliferation regimes and norms;
- slowing the spread of dangerous technology through unilateral and multilateral export controls;
- employing targeted diplomatic initiatives, including security guarantees, incentives, and sanctions;
- working to reduce the regional security threats that spawn interest in special weapons;
- applying military resources through "counter-proliferation" initiatives;<sup>1</sup> and
- implementing the "Cooperative Threat Reduction" program, also known as the Nunn-Lugar program, aimed at helping to secure weapon of mass destruction and WMD materials in the former Soviet Union.

Like its predecessors, the Clinton Administration has attempted to use all of these mechanisms, at various times and in various combinations, to restrain Iran's WMD and missile advances. In the end, whether one or another of these mechanisms has been used to its fullest extent is less important than whether, by taking advantage of its entire tool kit, the Administration has obtained results.

From my perspective, the record is mixed. There have been some important successes with respect to Iran's nuclear program and, possibly, with respect to aspects of its missile program. But there have also been some serious setbacks, especially with respect to Iran's development of biological and chemical weapons.

One useful way for filling in the Administration's non-proliferation scorecard vis-a-vis Iran is to identify the principal Iranian programs of concern and assess the results of the Administration's efforts in each case.

Based on the open record, Iran can be thought of as pursuing WMD and missile programs along at least *eleven* distinct paths, including:

1. Nuclear weapons (clandestine production of nuclear weapons material)
2. Nuclear weapons (purchase of nuclear weapons material)
3. Nuclear weapons (open, civil nuclear energy program)
4. Biological weapons (domestic production, with some outside assistance)
5. Basic chemical weapons (domestic production, including sulfur mustard, phosgene, and cyanide, with outside assistance)
6. Advanced chemical weapons (domestic production of agents such as, Soman, Tabun, Sarin, and VX, with outside assistance)

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<sup>1</sup> In using this term, I have in mind the use of passive defenses, active defenses (against theater-based threats), deterrence based on the threat of massive conventional retaliation, and adjustments to military operations and planning.



7. Scud missiles (purchases—including Scud-Cs with a range of 500 km)
8. Longer range ballistic missiles (purchases—North Korean 1,000 km No-Dong)
9. Scud and other short range missiles (indigenous production—including Scud-Cs with a range of 500 km—with outside assistance)
10. Longer range 1,000 to 1,400 km ballistic missiles (indigenous production, with outside assistance)
11. Cruise missiles (acquisition of the Chinese C-802 and the domestic development of land-attack derivatives)

To keep my remarks brief, I will only outline developments in each of these areas, but I would be pleased to expand my comments on particular points in response to questions from the Committee. For the convenience of the Subcommittee, I have appended to my testimony an annotate table, prepared by my colleague Gregory Koblentz, listing alleged transfers of nuclear, biological, chemical, and missile equipment and technology and the U.S. response, with particular reference to the imposition of sanctions.

1. *Nuclear weapons (clandestine production of nuclear weapons material)*. Despite reports dating back a number of years that Iran is seeking to develop the ability to manufacture nuclear weapons material, to date it has not been reported that Iran is building *any* of the key installations needed for this purpose. Iran is constrained by its status as a party to the Nuclear Non-Proliferation Treaty (NPT) to accept comprehensive International Atomic Energy Agency (IAEA) inspections and has voluntarily allowed wide-ranging monitoring that goes beyond the IAEA's normal oversight. To date, although the IAEA is now privy to U.S. intelligence, it has not unearthed any clandestine facility in Iran needed for the manufacture of nuclear weapons, and, as I noted earlier, there have been no reports that such a facility exists. Several reports indicate, moreover, that Iran's efforts to import equipment for a clandestine nuclear effort have been thwarted in particular cases, suggesting that U.S. intelligence and Western export controls are being used to advantage in this battle.<sup>2</sup> Recently, U.S. Arms Control and Disarmament Agency Director John Holum testified that in the past two years, Iran has made little or no progress down this path—or any other path—toward nuclear arms.<sup>3</sup>

On the other hand, it is also generally accepted that Iran is conducting suspicious research and is attempting to import equipment and technology relevant to the production of nuclear-weapons material.

*Tentative conclusion.* This facet of Iranian activities remains a continuing danger. However, the Clinton Administration's efforts to assist the IAEA in implementing inspections under the NPT, together with multilateral efforts (supported by U.S. intelligence) to restrict clandestine nuclear equipment and technology transfers to Iran, have kept Iran on the defensive and have significantly constrained this Iranian effort.

2. *Nuclear weapons (purchase of nuclear weapons material)*. It is widely understood that security over nuclear weapons materials in the former Soviet Union falls far short of international standards and that the risk of diversion and smuggling of such materials out of the Soviet successor states remains high, particularly from Russia, where the vast proportion of the materials are stored. U.S. officials have testified that Iran has been seeking to obtain such materials at installations in the former Soviet Union. So far, however, Iran is not known to have succeeded in this effort.

The Clinton Administration, with the strong support of Congress, has worked aggressively to cooperate with Russia and other successor states to upgrade security at facilities housing such materials. The United States is also purchasing some 500 tons of weapons usable uranium from Russia for conversion into reactor fuel (which will take it out of harm's way) and, in an extraordinary initiative known as Operation Sapphire, the United States quietly removed 500 kilograms of highly enriched uranium from an insecure facility in Kazakhstan.

Very serious dangers remain, however. As highlighted in a National Academy of Sciences report being released today, the U.S. program to work with Russia to en-

<sup>2</sup>Con Coughlin, "Britain Seizes Bomb-Grade Steel Cargo," *Washington Times*, August 12, 1996, p. 8; Mark Hibbs, "No German Nuclear Equipment Getting to Iran, Bonn Vows," *Nuclear Fuel*, April 10, 1995, p. 5; Thomas W. Lippman, "Stepped-Up Nuclear Effort Renews Alarm About Iran," *Washington Post*, April 17, 1995; Elaine Sciolino, "Iran Says It Plans 10 Nuclear Plants But No Atom Arms," *op. cit.*; *PPNNNewsbrief*, Third Quarter 1995, p. 17; Mark Hibbs, "Investigators Deny Iran Smuggled Weapons Material From Germany," *Nucleonics Week*, February 1, 1996, p. 14.

<sup>3</sup>Testimony of John Holum, Director, Arms Control and Disarmament Agency, before the House International Relations Committee, Subcommittee on International Operations and Human Rights on the FY 1998 Authorization for the U.S. Arms Control and Disarmament Agency, March 5, 1997.

hance material protection, accounting, and control is now starting to bear fruit and “tons” of weapons material are now under world-class security in Russia as a result of the program. But, the report continues, “tens of tons” are under only partial control and adequate security for “hundreds of tons” has yet to be provided. The report concludes that it is essential that the program, which has now built substantial momentum, continue with funding at least at current levels—or higher if new opportunities to enhance security arise.<sup>4</sup>

*Tentative conclusion.* Iran’s bid to purchase weapons-grade nuclear materials clandestinely remains a grave threat. U.S. programs are beginning to make important headway in addressing this danger, but years will be needed to bring it under control. Continued Congressional support is essential.

3. *Nuclear weapons (civil nuclear energy program).* Inasmuch as all facilities in the open Iranian nuclear energy program will be subject to IAEA monitoring, the concern in this sphere is not that particular installations will be misused for nuclear weapons, but that a large civil nuclear energy program will indirectly support the Iranian nuclear weapons effort by training scientists, technicians, and engineers in nuclear specialties. These individuals, in turn, could then switch over to work in a clandestine nuclear weapons program and use their training to help in the construction and operation of possible parallel undeclared nuclear installations.

In 1992, Washington succeeded in persuading China to postpone indefinitely the sale to Iran of a plutonium-producing research reactor.<sup>5</sup> In addition, in 1995, China suspended its plans, announced three years earlier, to supply two 300-megawatt nuclear power reactors to Iran.<sup>6</sup> More recently, China canceled plans to transfer to Iran a sensitive uranium “conversion” plant, able to produce uranium hexafluoride—a feedstock for the process used to produce weapons-grade uranium. This decision is apparently the result of the diplomatic intervention of the Clinton Administration.<sup>7</sup>

Russian assistance to the Iranian nuclear program has also slowed. Moscow’s plan for the sale to Iran of a sizable research reactor, suitable for the production of plutonium, appears to have been suspended. Secondly, under U.S. pressure in mid-1995, Russia canceled a contract to supply a highly sensitive uranium enrichment plant to Iran. Russia, however, remains committed to its sale of nuclear power reactors to that country, the first of which it is now building at Bushehr. This sale is consistent with international rules. However, the Administration continues to emphasize its opposition to the sale to the Russian government.<sup>8</sup> Recently, the United States placed another obstacle in the path of the project—which is already far behind schedule—by persuading Ukraine not to sell Iran the (non-nuclear) turbine for the facility.<sup>9</sup> At the same time, the Administration has been reluctant to undermine other elements of U.S. relations with Russia by treating this as the most important issue between our two countries; as a result, the Administration has twice waived the provisions of the Foreign Operations Appropriations Act that would require a termination of U.S. foreign assistance to Russia unless it ceased all transfers of nuclear equipment and technology to Iran.

*Tentative conclusion.* By diplomatic interaction with China, the Administration persuaded Beijing to suspend the transfer of the most sensitive of the civilian nu-

<sup>4</sup>*Proliferation Concerns: Assessing U.S. Efforts to Help Contain Nuclear and Other Dangerous Materials and Technologies in the Former Soviet Union* (Washington, D.C.: National Research Council of the National Academy of Sciences, April 17, 1997.)

<sup>5</sup>See Mark Hibbs, “Iran Sought Sensitive Nuclear Supplies from Argentina, China,” *Nucleonics Week*, September 24, 1992, p. 2; Steve Coll, “U.S. Halted Nuclear Bid by Iran,” *Washington Post*, November 17, 1992.

In December 1996, there were indications that China might revive the sale of the research reactor to Iran. See Mark Hibbs, “China Has Far to Go Before U.S. Will Certify, Agencies Now Say,” *Nucleonics Week*, December 12, 1996, p. 1.

<sup>6</sup>Supplementary materials submitted by Barbara Larkin, Acting Assistant Secretary for Legislative Affairs, U.S. State Department, *Hearings on Current and Projected National Security Threats to the United States and its Interests Abroad*, Select Committee on Intelligence, U.S. Senate, February 22, 1996 (supplementary materials supplied May 23, 1996), p. 135.

<sup>7</sup>Interview with Chinese official, Washington, D.C., March 1997.

<sup>8</sup>One aspect of the Russian reactor sale of particular concern to the United States are the arrangements for the disposition of the plutonium-bearing spent fuel that the Bushehr unit will produce. According to U.S. officials, as of December 1996, Russia and Iran had not yet concluded an agreement for the return of the spent fuel to Russia, a valuable non-proliferation measure traditionally included in Russian nuclear reactor sales contracts. Mark Hibbs, “Iran May Keep Russian Spent Fuel Or Take Plutonium, REPU, Waste,” *Nuclear Fuel*, December 18, 1995, p. 1; Mark Hibbs, “Iran, Russia Still Settling Countertrade Terms for PWRs,” *Nucleonics Week*, October 5, 1995, p. 9.

<sup>9</sup>Michael Gordon, “Ukraine Decides Not to Provide Reactor Parts to Iran,” *New York Times*, April 7, 1997.

clear plants that Iran has recently sought to purchase. Although Russia has delayed plans to build a sensitive research reactor in Iran, Washington has enjoyed less success in halting Russia's construction of the Bushehr nuclear power plant, but, at least, it has slowed this project somewhat.

4. *Biological weapons (BW)*. Controlling the spread of this weapon of mass destruction is probably the most daunting non-proliferation challenge facing the United States and its friends. The necessary technology is widespread in civilian industry, the manufacture of BW is relatively less difficult, and, because BW can be manufactured rapidly and in small-scale facilities, detecting BW programs can be extremely demanding. International controls lag far behind those currently covering nuclear weapons or those that will shortly cover chemical arms under the Chemical Weapon Convention.

The U.S. intelligence community believes Iran has been developing a substantial biological warfare program, and that, as of May 1996, it had acquired its first stocks of biological weapons. If true, this would be the most disturbing act of WMD proliferation during that year. The agency estimates that Iran currently possesses a limited stockpile of biological weapons that it could deploy using artillery, mortars, rockets, and aerial bombs.<sup>10</sup> The Central Intelligence Agency (CIA) is concerned that Iran has the potential to develop a biological warhead for its ballistic missiles, but does not expect this to occur before the end of the century.<sup>11</sup>

China has been implicated in supporting aspects of Iran's BW activities, but the extent of such involvement is murky and, apparently, has not raised the issue of sanctions.<sup>12</sup>

Let me point out that at the time of the 1991 Gulf War, Saddam Hussein possessed twenty-five missiles with BW warheads, which he considered a part of his "strategic" arsenal—able to cause mass casualties if used against the cities of an adversary. It is possible that Iranian efforts to achieve a parallel capability will be detected and might be discouraged or deterred.

Given Iran's progress in the area of biological weapons, the United States and its friends must be prepared with counter-proliferation measures to contain this threat—especially, defenses, deterrence, and adjustments in military doctrine and strategy.

*Tentative conclusion.* The Iranian BW threat is already very serious and is likely to worsen. However, Iran still has far to go to develop a mature, missile-based BW capability, and it may yet be possible to block these advances. New strategies need to be developed to address this threat.

5. *Basic chemical weapons (including sulfur mustard, phosgene, and cyanide)*. The CIA has stated that Iran is continuing to expand and diversify its chemical weapons program, already among the largest in the Third World. The agency estimates that Tehran currently controls a CW stockpile of several thousand tons that includes sulfur mustard, phosgene, and cyanide agents, and has the potential of producing 1,000 tons of these agents each year. The delivery means for these agents include "artillery, mortars, rockets, aerial bombs, and, possibly, even Scud warheads."<sup>13</sup> Importantly, the chemical agents that Iran possesses are World War I era weapons; it has yet to produce more advanced nerve agents, such as Soman, Tabun, Sarin, or VX.<sup>14</sup>

Based on technology dating back to World War I, these CW agents are easy to manufacture. Chinese firms have apparently played a role in supplying CW precursors to Iran, leading to the imposition of sanctions against several firms and persons

<sup>10</sup>The CIA has stated that while Iran's BW program is mostly in the research and development stages—likely investigating both toxins and live organisms as BW agents—Iran has "the technical infrastructure to support a significant BW program and needs little foreign assistance." "Supplementary Materials Submitted by John H. Moseman, Director of Congressional Affairs, Central Intelligence Agency," *Hearings of the Current and Projected National Security Threats to the United States and Its Interests Abroad*, Select Committee on Intelligence, U.S. Senate, February 22, 1996 (supplementary materials supplied May 10, 1996), p. 82.

<sup>11</sup>*Ibid.*

<sup>12</sup>U.S. officials have not publicly indicated whether China is implicated in Iran's BW program, but has apparently received intelligence that BW-related transfers have been made. Bill Gertz, "Albright Concedes 'Concern' Over China-Iran Transfers," *Washington Times*, January 24, 1997.

<sup>13</sup>"Supplementary Materials Submitted by John H. Moseman, Director of Congressional Affairs, Central Intelligence Agency," *Hearings on Current and Projected National Security Threats to the United States and Its Interests Abroad*, *op.cit.*, p. 82. The DIA has projected that Iran may have as much as 2,000 tons of CW agents in its stockpile. "Supplementary Materials Submitted by Lieutenant General Patrick M. Hughes, Director of the Defense Intelligence Agency," *Hearings on Current and Projected National Security Threats to the United States and Its Interests Abroad*, *op. cit.*, p. 206.

<sup>14</sup>W. Seth Carus, "Iran's Weapons of Mass Destruction," presented at the Nixon Center for Peace and Freedom, February 20, 1997.

in 1994 and 1995.<sup>15</sup> In November 1995, referring to Iran's CW program, Deputy Assistant Secretary of Defense for Near East and South Asia Bruce Reidel testified:

In the chemical arena, we have seen some evidence that China has provided some assistance or Chinese firms have provided some assistance, both in terms of the infrastructure for building chemical plants and some precursors for developing agents. I would point out here that the Chinese chemical industry is very rapidly growing at this time, and not all facets of it may be under the fullest scrutiny of the Chinese government.<sup>16</sup>

Chinese assistance for either the Iranian basic or advanced CW program is apparently continuing, inasmuch as Deputy Assistant Secretary of State Robert Einhorn recently testified that the Administration is reviewing the possible imposition of CW sanctions against Chinese entities. It is not clear to an outsider how extensive Chinese assistance may have been, nor is it clear to what extent the transfers to Iran have been deliberate Chinese policy or have been the result of unscrupulous exporters and a poorly differentiated Chinese export control system.

*Tentative conclusion.* Obviously, the Administration has not been successful in halting Iran's basic CW program. It is possible that with more active enforcement of the U.S. chemical weapons sanctions legislation the Clinton Administration might have achieved more, but the details needed to make this assessment have not been made public. It is also important to note that, as yet, Iran has not graduated to the more modern and more potent CW agents that Saddam Hussein possessed. In addition, the entry into force of the Chemical Weapon Convention later this month will reinforce the norm against the possession of chemical armaments and will enhance multilateral export controls, developments that will provide added support for U.S. efforts to curb Iran's activities in this sphere. To meet the challenge posed by Iran's existing CW capabilities, the United States and its friends will have turn to counterproliferation measures: defenses, deterrence, and adjustments in military planning to account for this threat.

6. *Advanced chemical weapons (such as, Soman, Tabun, Sarin, and VX).* In the case of Iraq, VX nerve gas, mated with Al-Hussein missiles formed the second component of Saddam Hussein's strategic arsenal. Fortunately, Iran has yet to produce these agents, but it is undoubtedly attempting to do so. As noted in item 5, above, China may be assisting this effort.

It is important to stress that Saddam Hussein made the transition from basic CW agents to more advanced ones in the course of four to five years, with few restraints on his access to outside assistance. Iran, ten years after acquiring basic CW agents, still has not achieved a more advanced capability, suggesting that U.S.-led international efforts to curtail its access to needed technologies may be succeeding.<sup>17</sup>

*Tentative conclusion.* Given the greater difficulty in producing these agents and the fact that Iran apparently does not yet possess them, assertive U.S. diplomatic efforts—including the imposition of sanctions against supplier states—could make the critical difference in arresting this dangerous aspect of Iran's WMD program.

7. *Scud missiles (purchases—including Scud-Cs with a range of 500 km).* Iran possesses two versions of the nuclear-capable, North Korea-supplied, Scud ballistic missile—the Mod. B (300-km range) and the Mod. C (500-km range).<sup>18</sup>

On March 6, 1992, the United States imposed sanctions under missile non-proliferation provisions of the Arms Export Control and Export Administration Acts against the Iranian Ministry of Defense and Armed Forces Logistics and against two

<sup>15</sup>Gary Milhollin and Meg Dennison, "China's Cynical Calculation," *New York Times*, April 24, 1995, p. A17.

<sup>16</sup>"Testimony of Deputy Assistant Secretary of Defense for Near East and South Asia Bruce Reidel," Hearings before the House International Relations Committee, *U.S. Policy on Iran*, November 9, 1995.

<sup>17</sup>*Proliferation: Threat and Response* (Washington, D.C.: U.S. Department of Defense, 1996), p. 15.

<sup>18</sup>It also has in its inventory the Chinese-supplied CSS-8 missile with an estimated range of 150 kms. "Statement by Joseph S. Bermudez Jr.," before the House Committee on Foreign Affairs, Subcommittee on International Security, International Organizations and Human Rights, September 14, 1993; William C. Potter and Harlan W. Jencks, eds., *The International Missile Bazaar* (Boulder, CO: Westview Press, 1994), p. 65; Office of the Secretary of Defense, *Proliferation: Threat and Response*, op. cit., p. 16; Also see "Iran Said Seeking Scud Know-How in Germany," *Reuters*, December 15, 1994; Barbara Starr, "Iran Gets 'Scud' TELs From North Korea," *Jane's Defense Weekly*, May 13, 1995, p. 5.

Iran has in its possession a contingent of strike aircraft which could be modified to carry nuclear weapons, including U.S.-origin F-4s, F-5s and F-14s, as well as Soviet-origin MiG-29s and SU-24s. See Office of Technology Assessment, *Technologies Underlying Weapons of Mass Destruction* (Washington, DC: U.S. Government Printing Office, December 1993), pp. 237-242; International Institute of Strategic Studies, *The Military Balance 1993-1994* (London: International Institute for Strategic Studies, 1993), p. 116.

North Korean entities for engaging in "missile proliferation activities."<sup>19</sup> According to U.S. officials, the activities involved were the transfer by North Korea to Iran of Scud missiles and production technology for such missiles, which resulted in the imposition of "Category I" sanctions, the harsher sanctions under the above-noted laws.<sup>20</sup> On May 24, 1996, Washington imposed less severe Category II sanctions against the Iranian Ministry of Defense Armed Forces Logistics, the Iranian State Purchasing Office, and the Korea Mining Development Trading Bureau for engaging in missile technology proliferation activities.<sup>21</sup> The precise nature of the activities leading to the sanctions remains classified, but U.S. officials have indicated that they involved the provision by North Korea of missile components, equipment, and materials rather than complete missiles, production technology, or major sub-systems.

In the period between the two episodes, the United States and North Korea engaged in an extended dialogue, as they negotiated and implemented the October 1994 Agreed Framework, aimed at curtailing North Korea's nuclear weapon program. As one element of this dialogue, the United States has made clear that it considers North Korea's missile exports and development of longer range missiles to be issues of great concern. Washington and Pyongyang have yet to hold more than preliminary discussions on this matter, however. Nonetheless, it would appear that between 1992 and 1996, North Korean exports of complete Scud missiles ended and, judging from the fact that the United States imposed only "Category II" sanctions in 1996, it would seem that North Korean missile related exports to Iran slackened.

Even as it tries to slow further expansion of Iran's arsenal of Scud's, the United States must come to terms with the threat currently posed by Iran's existing Scud-B and Scud-C missiles. In this respect, U.S. theater missile defense programs will play a critically important role and need to be sustained.

*Tentative conclusion.* For reasons that remain unclear, but which may include the impact of U.S. diplomacy, North Korea is apparently no longer exporting Scud's to Iran.

8. *Longer range missiles (purchases—North Korean 1,000 km No-Dong).* Another component of the Iranian missile program is its effort to acquire the 1,000-km range Nodong missile from North Korea, a capability that would enable Iran to target Israel for the first time.

The status of the Nodong is not certain at this time. There have been some indications that Pyongyang's efforts to develop the system have stalled; according to the published literature, for example, it has been flight tested only once. A recent report in the Japanese press however, states that North Korea has now deployed the system. There have been no reports that North Korea has exported the Nodong, however.

Despite U.S. expressions of concern about the system to North Korea, U.S. officials assume that technical or financial factors, rather than U.S. diplomacy, have delayed the production and/or transfer of the system. The Administration is hoping to halt production and transfer of the Nodong as part of its on-going talks with North Korea on missile exports.

*Tentative conclusion.* A window of opportunity remains for halting this transfer. With the United States enlarging its diplomatic engagement with North Korea, it may be possible to reach an understanding with Pyongyang to kill this project.

9. *Scud and other short-range missiles (indigenous production).* Iran is thought to be developing the capability to manufacture the Scud-C indigenously. Presumably, elements of this capability were originally provided by North Korea, and Pyongyang may be supporting this effort through continued exports of missile-related equipment and technology.

However, U.S. officials have indicated that China and Russia may also be contributing to this Iranian effort.

*Chinese assistance.* In June 1995, U.S. intelligence reports were quoted in the press as stating that evidence "strongly implicates" China in the transfer to Iran of equipment, materials and scientific know-how that could be used in the manufacture of advanced ballistic missiles—possibly a missile similar to the Chinese M-9 or M-11.<sup>22</sup> In July 1995, China was reported to have transferred "dozens, perhaps

<sup>19</sup> "Imposition of Missile Proliferation Sanctions Against North Korean and Iranian Entities," *Federal Register*, April 7, 1992, p. 11767. The North Korean entities were Lyongakasan Machinery and Equipment Export Corporation (North Korea) and the Changgwang Credit Corporation (North Korea). The sanctions expired twenty-four months later.

<sup>20</sup> Interview, March 6, 1997, Washington, D.C.

<sup>21</sup> *Federal Register*, June 12, 1996, p. 29785; "Daily on U.S. Government Notice of Sanctions Against DPRK," *Chosen Ilbo*, June 30, 1996, in *FBIS-EAS-96-127*, July 3, 1996.

<sup>22</sup> R. Jeffrey Smith, "Iran's Missile Technology Linked to China, Report Says," *Washington Post*, June 17, 1995; Barbara Opall, "U.S. Queries China on Iran," *Defense News*, June 19-25,

hundreds, of missile guidance systems and computerized machine tools" to Iran, as well as rocket propellant ingredients that could be used on its current stockpile of Scud Mod. Bs and Cs, as well as on Scud variants that Iran may produce domestically in the future.<sup>23</sup>

All such transfers would violate pledges that China made to the United States in February 1992 and reaffirmed in October 1994, in which China agreed to abide by missile technology transfer restrictions of the MTCR. These transfers could also violate U.S. missile non-proliferation laws.<sup>24</sup> I am told that the analysis of these cases has been completed, but that the Administration is refusing to take action, apparently because of concern that the reimposition of sanctions against China would adversely affect overall bilateral relations at a time when the Administration is attempting to conduct a "high-level" dialogue with Beijing.

*Russian assistance.* I have been told that there are a number of transactions involving support for the Iranian Scud production capability that have been traced to Russia but that the Russian government has not been responsive to U.S. efforts to obtain a serious investigation of U.S. concerns.<sup>25</sup>

It appears that the Clinton Administration believes it lacks sufficiently clear evidence to invoke U.S. sanctions laws against Russia or against the Russian entities that may be involved. The matter is made more complicated by the fact that Russia is a member of the MTCR, a status which exempts properly authorized missile-related export activities from U.S. missile-export sanctions laws. The United States can, however, impose sanctions under these laws against Russian entities which make exports not authorized by the Russian government or which fraudulently obtain such authorizations. To encourage Russia to resolve the cases that the United States has brought to its attention, the Clinton Administration should remind Russia of this provision of U.S. sanctions law.

On the other hand, if Russia is authorizing missile-related exports to Iran, the United States has other mechanisms for penalizing its behavior. These include the selective denial, as a matter of executive policy, of export licenses benefitting the Russian aerospace sector (such as licenses of U.S. communications satellites for launch on Russian launch vehicles) or the refusal to extend current agreements granting Russia access to the international commercial space launch market. The Clinton Administration originally permitted Russia access to this market on condition that it adhere to the MTCR; Russia's apparent deviations from MTCR rules should provide grounds for revisiting this question.<sup>26</sup>

*Tentative conclusion.* Iran's ability to manufacture Scud type missiles is apparently dependent in important respects on outside assistance that appears to be continuing at this time. Intensified U.S. diplomatic efforts, backed up by the threat of new sanctions against the Chinese and Russian aerospace sectors, are needed to help contain this danger. The development of theater missile defenses must also be an important element of the U.S. strategy for meeting this challenge, if non-proliferation efforts fail.

10. *Longer range 1,000 to 1,400 km missiles (indigenous production, with outside assistance).* Israel has expressed increasing concern about Iranian efforts to develop this system. Again, Russia is alleged to be assisting this program.

1995, p. 1; "China Denies Violating Missile Treaty," *United Press International*, June 20, 1995; Jim Mann, "U.S. Says China May Have Aided Iran Missile Program," *Los Angeles Times*, June 23, 1995; "Testimony of Michael Eisenstadt," before the Committee on International Relations, U.S. House of Representatives, September 12, 1996.

<sup>23</sup> Elaine Sciolino, "CIA Report Says Chinese Sent Iran Arms Components," *New York Times*, June 21, 1995; "Chinese Shipments Violate Controls," *Jane's Defense Weekly*, July 1, 1995, p. 3.

<sup>24</sup> China pledged to the United States in February 1992 that it would abide by the standards and parameters of the MTCR and reiterated this pledge in October 1994, when it also declared that it would not transfer surface-to-surface missiles inherently capable of carrying a 500 kg payload to a distance of 300 km or more. U.S. officials fear that Beijing interprets these undertakings as permitting transfers of missile-production technology and missile components, however.

<sup>25</sup> Interview with U.S. official April 1997.

<sup>26</sup> Even though the Russian firms that may be exporting missile technology to Iran may not be those that are the beneficiaries of access to the commercial satellite launch market, the latter organizations are powerful players within Russia and would have much to lose if their access to that market were foreclosed. As occurred in 1993, these organizations could be expected to exert pressure within the Russian bureaucracy and the Russian space/missile industry to halt improper sales that could jeopardize their lucrative commercial launch business.

A number of recent press reports suggest that Russia is assisting in this endeavor, possibly providing technology from its retired SS-4 strategic nuclear missile.<sup>27</sup>

The application of U.S. sanctions laws and policy is comparable to that outlined in item 9, above: Russia, though largely exempt from such laws, appears to be violating the rules of the MTCR, creating a basis for discretionary sanctions by the United States in the form of suspension of export licenses, especially those directed at the Russian aerospace sector and commercial space launch industry.

*Tentative conclusion.* Iran's ability to manufacture this longer range system appears to be dependent in important respects on outside assistance, and Iran appears to be receiving such assistance at this time from Russia. Intensified U.S. diplomatic efforts, backed up by the threat of new sanctions, are needed to help contain this danger. Given the new dangers that Iranian longer-range missiles would bring to the Middle East, halting this program must remain a top priority of the Clinton Administration.

11. *Cruise missiles (acquisition of the C-802 and the development of land-attack derivatives).* China is the supplier of Iran's inventory of land-based and shipborne anti-ship cruise missiles and is believed to be assisting Iran in the development of anti-ship missiles based on Chinese prototypes.

Because the range/payload capabilities of the C-802 are below the thresholds of the MTCR these transactions do not appear to violate U.S. missile-export sanctions laws. Nor do the exports appear to violate the Iran-Iraq Arms Non-Proliferation Act. Deputy Assistant Secretary of State Robert Einhorn testified last week that the number of missiles transferred does not appear to be sufficient to trigger the sanctions provisions of that legislation.

It is apparent that Iran's WMD and missile capabilities are growing, in some areas dramatically, and along with them, the dangers that Iran is posing to U.S. forces and friends in the Middle East.

Using a wide variety of non-proliferation tools, the Clinton Administration has had a measure of success in containing Iran's bid to acquire nuclear weapons. Its job has been made somewhat more manageable because nuclear arms are very difficult to manufacture, requiring considerable time, expense, and difficult-to-conceal facilities. Moreover, the tools in the nuclear non-proliferation tool kit—treaties, export controls, inspections, and international norms—are more potent than those applicable to other weapons of mass destruction or to missiles. The single most important measure needed to continue to constrain the Iranian nuclear weapons program is sustained implementation of the U.S. Nunn-Lugar program in Russia and other NIS states.

U.S. efforts to curb the Iranian BW threat—an extremely demanding task—have not succeeded. However, Iran has yet to achieve a mature, missile-based BW capability, and it may yet be possible to block these advances. U.S. counter-proliferation efforts will also play an important role in containing the Iranian BW challenge.

Similarly, although Iran now possesses a substantial arsenal of basic chemical weapons, it still has far to go before acquiring a modern, fully developed chemical arsenal, and preventive, non-proliferation diplomacy can still be effective in slowing or blocking Iranian progress in this sphere. Stricter enforcement of U.S. sanctions laws is needed to achieve this result, and the Chemical Weapon Convention will also help to limit Iranian advances. Continued development of counter-proliferation measures to address the existing Iranian CW threat will also be needed.

Iran's existing Scud-B and Scud-C missiles already pose a serious threat to U.S. forces and friends in the Persian Gulf. Iran is apparently not purchasing additional missiles, however. To deal with the existing threat, the Clinton Administration must continue its efforts to develop robust theater missile defenses. The Administration must push China and Russia more aggressively to halt their support for Iran's efforts to produce missiles indigenously, especially longer-range systems. Stricter enforcement of existing sanctions laws against China and the threat of discretionary sanctions against the Russian aerospace sector are essential if these efforts are to succeed.

Finally, the 1996 Iran-Libya Sanctions Act, which imposes sanctions on foreign entities that invest \$40 million or more in Iran's energy sector, seeks to limit the funds available to Iran's WMD programs by limiting Iran's future energy sector revenues. Recent reports suggest that the sanctions law is curtailing foreign investment in this sector. Given the great costs of WMD and missile programs, it is possible that this legislation will make an important contribution to slowing Iran's bid for unconventional arms and advanced delivery systems.

<sup>27</sup> Robin Wright, "Russia Warned on Helping Iran Missile Program," *Los Angeles Times*, February 12, 1997.

CHRONOLOGY OF ALLEGED TRANSFERS OF NUCLEAR, BIOLOGICAL, CHEMICAL AND  
MISSILE TECHNOLOGY, EQUIPMENT AND MATERIAL INVOLVING IRAN

**Nuclear Episodes**

- *January 8, 1995*: Russia and Iran sign an agreement on the completion of the two partially constructed nuclear reactors at Bushehr. In December 1995, Congress approved legislation that would prevent the United States from providing any economic assistance to Russia unless Russia halted the reactor deal or the President certifies every six months that the aid was "important to the national security interests of the United States." The President issued that certification on May 9, 1996 and November 9, 1996.

**Missile Episodes**

- *March 6, 1992*: The United States imposes sanctions on the North Korean entities, Lyongaksan Machineries and Equipment Export Corporation and Changgwang Credit Corporation, and Iran's Ministry of Defense and Armed Forces Logistics for missile proliferation activities. The sanctions include a two-year ban on all government contracts with, export licenses to, and imports from, the entities listed above as well as all North Korean firms in the missile, electronics, space systems and military aircraft industries. These sanctions were imposed for the transfer of items in Category I of the MTCR Annex which substantially contributed to Iran's missile program. The sanctions expired March 6, 1994.
- *March 1992*: China pledges in writing to abide by the MTCR.
- *September 1993*: Russia signs an agreement pledging to abide by the MTCR.
- *October 1994*: China promises not to export any surface-to-surface missiles "inherently capable" of delivering a 500 kilogram payload to at least 300 kilometers and to abide by the guidelines and parameters of the MTCR.
- *May 13, 1995*: *Jane's Defense Weekly* cites a CIA report that North Korea recently shipped 4 Scud Transport-Erector-Launchers (TELS) to Iran.<sup>1</sup>
- *June 1995*: Reports emerge that the CIA had concluded that China had delivered guidance systems, rocket fuel ingredients, production technology, and computerized machine tools to Iran to assist that country in improving imported ballistic missiles and producing its own missiles.<sup>2</sup>
- *August 1995*: Russia joins the MTCR.
- *January 1996*: Iran is reported to have tested a C-802 anti-shiping cruise missile provided by China. The United States examines the sale of the C-802s for sanction ability under the Iran-Iraq Non-Proliferation Act and determines that the transaction did not cross the threshold of "destabilizing types and numbers."<sup>3</sup>
- *May 24, 1996*: The United States imposes sanctions on the North Korean firm Changgwang Sinyong Corporation (aka the Korea Mining Development Trading Bureau) and Iran's Ministry of Defense Armed Forces Logistics and the State Purchasing Office. The sanctions include a two-year ban on all missile-related government contracts with, and export licenses for, the listed entities as well as North Korea's entire missile, electronic, space, and military aircraft industry. These sanctions were imposed for the transfer of items in Category 11 of the MTCR Annex. These sanctions are still in effect.
- *July 1996*: Iran's Defense Industries Organization reportedly transfers equipment to Syria for the production of solid-fuel rocket motors.<sup>4</sup>
- *August 1996*: China Precision Engineering Institute reportedly agrees to sell gyroscopes, accelerometers and test equipment that could be used to build and test missile guidance systems to Iran's Defense Industries Organization.<sup>5</sup>
- *December 1996*: An Israeli article states that Iran is developing a missile based on the 2,000 km range SS-4 with the help of Russian scientists.<sup>6</sup> Israeli intel-

<sup>1</sup>Barbara Starr, "Iran Gets 'Scud' TELs From North Korea," *Jane's Defense Weekly*, May 13, 1995, p. 5.

<sup>2</sup>Barbara Opall, "US Queries China on Iran," *Defense News*, June 14-25, 1995, p. 1; Elaine Sciolino, "CIA Report Says Chinese Sent Iran Arms Components," *New York Times*, June 21, 1995, p. A1. "Chinese Shipments Violate Controls," *Jane's Defense Weekly*, July 1, 1995, p. 3.

<sup>3</sup>Barbara Starr, "Iran Adds New Threat With Cruise Missile Test," *Jane's Defense Weekly*, February 7, 1996, p. 14; Bill Gertz, "China Sold Iran Missile Technology," *Washington Times*, November 21, 1996, p. 1.

<sup>4</sup>Bill Gertz, "China Sold Iran Missile Technology," *Washington Times*, November 21, 1996, p. 1.

<sup>5</sup>Ibid.

<sup>6</sup>"Iran Said to Be Developing Long-Range Missile," *Deutsche Presse-Agentur*, December 5, 1996.



ligence revealed, and the United States verified, that detailed plans on how to build the SS-4 as well as some of its parts, reportedly guidance components, were acquired by Iran.<sup>7</sup> The United States protested the transfers during a meeting between Prime Minister Chernomyrdin and Vice President Gore in February and during the Clinton-Yeltsin summit in March.

- *March 1997*: An Israeli press report states that Iran had transferred 50 Scud-C missiles and 50 aircraft to Syria. The aircraft were transferred in December 1996, but the date of the missile transfer is not given.<sup>8</sup>
- *April 1997*: According to an unnamed White House official, Russians are assisting Iran in upgrading the guidance systems and engines of the Scud missiles in its inventory.<sup>9</sup>
- *April 1997*: Israeli sources report that Iran recently ground-tested the engine for a 1,000 kilometer-range missile being developing with Russian assistance and is also developing a missile with a range of about 1,500 kilometers with Russian help.<sup>10</sup>

### CW Episodes

- *July 1993*: The United States protests to China about the shipment of CW precursors for mustard gas to Iran aboard the vessel, Yin He. In late August, the ship was inspected jointly by Saudis, Americans, and Chinese and no CW precursors were found.<sup>11</sup>
- *July 16, 1994*: The United States imposes sanctions on an Israeli for using British and Polish front companies to ship CW precursors, strongly suspected to be from China, to Iran.<sup>12</sup>
- *November 19, 1994*: The United States imposes sanctions on Manfred Felber (Austrian), Luciano Moscatelli (Australian) and Gerhard Merz (German) for shipping Chinese CW ingredients to Iran.<sup>13</sup>
- *February 18, 1995*: The United States bars three Hong Kong companies from selling goods in the US for at least one year for shipping CW ingredients from China to Iran. The companies are Asian Ways Ltd., WorldCo Ltd., and Mainway International.<sup>14</sup>
- *March 1995*: An article states that the United States has been monitoring shipments of CW precursors to Iran over the past three years.<sup>15</sup>
- *November 1995*: Referring to Iran's chemical weapons program, Bruce Reidel, Deputy Assistant Secretary of Defense for Near East and South Asia, testifies, "In the chemical arena, we have seen some evidence that China has provided some assistance or Chinese firms have provided some assistance, both in terms of the infrastructure for building chemical plants and some precursors for developing agents. I would point out here that the Chinese chemical industry is very rapidly growing at this time and not all facets of it may be under the fullest scrutiny of the Chinese government."<sup>16</sup>
- *January 1996*: An unconfirmed report in a Hong Kong paper states that the Customs Department is investigating a Chinese state-owned arms manufacturer for smuggling arms, including chemical weapons, to the Middle East.<sup>17</sup> Another report indicates that the Hong Kong firm, Rex International Development Co., Ltd., is 52% owned by state-owned arms manufacturer China North Industries Group (Norinco).<sup>18</sup>

<sup>7</sup>Robin Wright, "Russia Warned on Helping Iran Missile Program," *Los Angeles Times*, February 12, 1997, p. A1; Bill Gertz, "Gore Raises Sale to Iran With Chernomyrdin," *Washington Times*, February 13, 1997, p. A10.

<sup>8</sup>"Israel: Intelligence Sources Report Growing Iran-Syria Cooperation," *Yedi'ot Aharonot*, March 27, 1997, p. 19 in FBIS-TAC-97-086, March 28, 1997.

<sup>9</sup>Philip Finnegan and Steve Rodman, "Israel Tries to Curb Russian Aid to Iran," *Defense News*, April 14-20, 1997, p.1.

<sup>10</sup>"Israel Says Iran, Russia Ground Test Missile," *Reuters*, April 13, 1997; "Israel-Iran," *Reuters*, April 13, 1997.

<sup>11</sup>Arms Control Reporter 1994, p. 704.E-2.104.

<sup>12</sup>Gary Milhollin and Meg Dennison, "China's Cynical Calculation," *New York Times*, April 24, 1995, p. A17.

<sup>13</sup>Ibid.; State Department official.

<sup>14</sup>Ibid.; State Department official.

<sup>15</sup>Ibid.

<sup>16</sup>"Testimony of Deputy Assistant Secretary of Defense for Near East and South Asia Bruce Reidel," Hearings before the House International Relations Committee, US. Policy on Iran, November 9, 1995.

<sup>17</sup>"Hong Kong: SAR 'Definitely Not' Arms Smuggling Transit Center," *Hongkong Standard*, January 21, 1997, p. 4 in FBIS-CHI-97-013, January 22, 1997.

<sup>18</sup>"Customs Probe China-Linked Arms Sales to Middle East: Report," *Agence France Presse*, January 20, 1997.

- *March 1996*: An article reports that the United States had been tracking shipments of chemical weapons-related equipment from China to Iran for more than a year. The trade is described as “recent and ongoing.” The issue will be raised by National Security Advisor Anthony Lake with his Chinese counterpart, Liu Huaqiu. In February, China passed legislation to tighten chemical exports.<sup>19</sup>
- *Summer of 1996*: Iran reportedly takes delivery from China of 400 metric tons of chemicals, including carbon sulfide, a precursor for some nerve agents.<sup>20</sup>
- *June 1996*: An article reports that an Indian firm agreed in early 1996 to build a plant in Iran capable of producing phosphorous pentasulfide, a precursor to tabun and other nerve agents.<sup>21</sup>
- *January 1997*: Secretary of State Madeline Albright tells a Senate committee that the US has not determined whether or not to impose sanctions on the Chinese entities shipping CW-related equipment, technology and material to Iran.<sup>22</sup>
- *April 1997*: According to Robert Einhorn, Deputy Assistant Secretary of State for Non-Proliferation, the United States is actively investigating sales of precursors, production equipment, and production technology by Chinese entities to Iran’s chemical weapons program.<sup>23</sup>

#### **BW Episodes**

- *November 1995*: According to Secretary of State Madeline Albright, the United States received reports in November 1995 that Chinese firms had supplied Iran with dual-use equipment that could be used in a biological weapons program.<sup>24</sup>

<sup>19</sup>R. Jeffrey Smith, “Chinese Firms Supply Iran With Gas Factories, U.S. Says,” *Washington Post*, March 8, 1996, p. A26.

<sup>20</sup>Bill Gertz, “China Sold Iran Missile Technology,” *Washington Times*, November 21, 1996, p. 1.

<sup>21</sup>Con Coughlin, “Iran Secures Aid To Make Poison Gas In Deal With India,” *Washington Times*, June 23, 1996, p. A7.

<sup>22</sup>Bill Gertz, “Albright Concedes ‘Concern’ Over China-Iran Transfers,” *Washington Times*, January 24, 1997, p. A6.

<sup>23</sup>Senate Governmental Affairs Committee, International Security, Proliferation and Federal Services Subcommittee, *Proliferation: Chinese Case Studies*, April 10, 1997.

<sup>24</sup>Bill Gertz, “Albright Concedes ‘Concern’ Over China-Iran Transfers,” *Washington Times*, January 24, 1997, p. A6; Carol Giacomo, “Albright Sees China Concerns, Russia initiative,” *Reuters*, January 20, 1997.

**Alleged Transfers of Nuclear, Biological, Chemical, and Missile Equipment and Technology, and the U.S. Response**

Episode	Supplier	Date	Relevant laws	U.S. response	Status
<b>Nuclear</b>					
Nuclear Reactors .....	Russia .....	Jan 1995 .....	'96 For Ops App .....	Waiver/Protest ...	Delayed
<b>Missile</b>					
Missiles & Production	DPRK .....	Mar 1992 .....	AECA/EAA .....	Sanctions im- posed.	Talks Pending
Missile TELs .....	DPRK .....	May 1995* .....	AECA/EAA .....	? .....	?
Missile Components & Production Tech- nology.	China .....	June 1995* .....	AECA/EAA .....	? .....	?
Cruise Missiles .....	China .....	Jan 1996* .....	IINA .....	Protest .....	No Sanctions
Missile Components ..	DPRK .....	May 1996 .....	AECA/EAA .....	Sanctions im- posed.	Talks Pending
Missile Production Equipment.	Iran (to Syria) ...	July 1996 .....	AECA/EAA .....	? .....	?
Missile Components ..	China .....	Aug 1996 .....	AECA/EAA & IINA .....	? .....	?
Missile Components & Technology.	Russia .....	Dec 1996* .....	AECA/EAA & IINA?? ..	Protest .....	Promise to stop?
Missiles .....	Iran (to Syria) ...	Mar 1997* .....	AECA/EAA .....	? .....	?
Missile Technology ....	Russia (Scud) ...	April 1997* .....	AECA/EAA & IINA?? ..	? .....	?
Missile Technology (1,000+ km range).	Russia .....	April 1997* .....	AECA/EAA & IINA?? ..	? .....	?
<b>Chemical Weapons</b>					
CW Precursors .....	China .....	July-Aug 1993 ..	AECA/EAA .....	Inspection of Yin He.	No precursors found
CW Precursors .....	China .....	July 1994 .....	AECA/EAA .....	Sanctions on front company.	?
CW Precursors .....	China .....	Nov 1994 .....	AECA/EAA .....	Sanctions on front company.	?
CW Precursors .....	China .....	Mar 1995 .....	AECA/EAA .....	Sanctions on front company.	?
CW Precursors & In- frastructure.	China .....	Nov 1995* .....	AECA/EAA .....	? .....	?
CW Equipment .....	China .....	Mar 1996* .....	AECA/EAA & IINA .....	? .....	?
CW Precursors .....	China .....	Summer 1996 ...	AECA/EAA & IINA .....	? .....	?
CW Plant .....	India .....	June 1996* .....	AECA/EAA & IINA .....	? .....	?
<b>Biological Weapons</b>					
BW Equipment .....	China .....	Nov 1995 .....	AECA/EAA & IINA .....	? .....	?

\*=Date Reported

1996 For Ops App: The FY96 Foreign Operations Appropriations contains a measure to cut-off aid to Russia for its support of Iran's nuclear program.

AECA/EAA: Arms Export Control Act/Export Administration Act sanctions for missile and CBW proliferation.

IINA: Iran-Iraq Nonproliferation Act sanctions for shipments of advanced conventional weapons to Iran and, after February 10, 1996, for assistance to Iran's NBC programs. ??=Unclear whether IINA applies to Iran's ballistic missile acquisitions efforts.

*Italicized entries indicate sanctions imposed by the United States.*

Prepared by Gregory Koblenz for the Carnegie Endowment for International Peace

## Export Controls in the People's Republic of China (PRC): Findings and Considerations<sup>1</sup>

*[Prepared by Richard T. Cupitt, Associate Director for Research, Center for International Trade and Security, University of Georgia, Athens, Georgia.]*

### THE PRC: PROLIFERATOR OR PARTNER?

With its ratification of the Chemical Weapons Convention on April 7, the People's Republic of China (PRC) took another step toward integrating itself into the non-proliferation community. For decades the PRC denounced international efforts to stem proliferation. More recently, the PRC has begun to seek a new voice in shaping the norms, rules and procedures of various nonproliferation regimes. Consequently, the PRC is now a party to all the major nonproliferation treaties and conventions,

and it supports some additional measures favored by the United States, such as a comprehensive test ban.<sup>2</sup>

Integration into the nonproliferation community carries many obligations with it—some explicit, some implied. Among the most important responsibilities facing each country is insuring that its exports do not foster nuclear, chemical, biological weapons programs in other countries. Allegations that military goods and dual-use nuclear, chemical, and missile items have gone from the PRC to countries of proliferation concern, particularly Iran and Pakistan, raise doubts about the commitment of Beijing to nonproliferation norms and the PRC's capacity to control the export of sensitive items from its territory.<sup>3</sup> In addressing these concerns, some questions to consider, among others, are:

- How does the PRC control trade in military and dual-use (goods, services, and technologies with both military and commercial applications) items?
- What factors inhibit effective development or implementation of PRC export controls?

### Current PRC Export Controls

Chinese officials assert that the PRC maintains strict control over the export of military and sensitive dual-use items. Certainly, before the central government began experimenting with market-oriented economic reforms in 1979, the PRC had direct control over the production and distribution of all sensitive goods. The transformation of the economy, however, gave new responsibilities and authority to individual enterprises and local officials. This undermined the old communist command economy-style system of export controls. In response to this situation, and to international pressure, the PRC began to adopt new regulations on the transfer (import or export) of sensitive technology as early as 1985.

From a nonproliferation perspective, the export control systems of most members of the four key supplier groups—the Australia Group, the Nuclear Suppliers Group (NSG), the Missile Technology Control Regime (MTCR), and the Wassenaar Arrangement—share similar standards of effective protection, including comparable legal frameworks, licensing practices, interagency processes, control lists, verification practices, customs authority, penalties, and more. PRC export controls remain far from being “complementary in practice” to multilateral standards and to the systems of some of their neighbors. Based on an assessment methodology developed at the University of Georgia, PRC export controls include about 38% of the common policies, structures, and practices of supplier group members. This number increases to about 50% when those policies, structures, and practices are weighted for importance (see Table 1).

Despite these discrepancies, the PRC is developing a more comparable export control system, even if the pace is deliberate. Some positive cues include:

- *An improving legal framework.* The Foreign Trade Law of 1994 already specifies that the government can restrict trade for national security reasons or to fulfill its international obligations. It requires enterprises to get government licenses to trade in restricted items, such as heavy water, dual-use chemicals, materials associated with the production of toxins. Allegedly, the Science and Technology Department of the Ministry of Foreign Trade and Economic Cooperation (MOFTEC) currently approves about 100 such export licenses a year, conforming to this legislation. Reportedly, the State Council and various departments are preparing specific legislation on nonproliferation export controls for the next National People's Congress.
- *The development of “catalogues” or lists of controlled chemical, nuclear and other items of proliferation concern.* China, for example, already appears to have a list of controlled chemicals roughly in line with the Verification Annex of the Chemical Weapons Convention.
- *The existence of bureaucratic structures to review and approve licenses of military and dual-use items.* For military items, the Ministry of Foreign Affairs (MOFA), the Headquarters of the General Staff of the PLA, the Commission of Science, Technology and Industry for National Defense (COSTIND), MOFTEC and others have a voice on the coordinating body (the State Administrative Committee on Military Products Trade), with guidance from the Central Military Commission and the State Council. For dual-use items, MOFTEC coordinates with other appropriate bodies, such as the Ministry of the Chemical Industry and the General Administration of Customs, to review and approve licenses, under the authority of the State Council. Reportedly, the State Council is forming a new body specifically for arms control issues that will likely have an impact on nonproliferation export control policy.
- *The punishment of violators.* Allegedly MOFTEC has used administrative sanctions to punish enterprises and individuals that have violated export control

procedures. Punishments ranged from warnings, cessation of trading rights, confiscation of items, and firings, although these are difficult to verify.

- *Increasing attention to export control issues.* Although very resistant to threats, Chinese officials have made some concessions to the United States on the transfer of nuclear and missile items. The PRC also began attending the annual Asian Export Control Seminar sponsored by Australia, Japan, and the United States in 1996. This year, the PRC raised the level of its delegation to the 4th Asian Export Control Seminar, which is one of the few settings in which both representatives from Beijing and Taipei sit at the same table and discuss security issues. Contacts with the Chinese Academy of Engineering Physics and other key organizations in the Chinese nuclear community about export controls have also increased.

### **Obstacles to Effective PRC Export Controls**

Many concerns mitigate many of these positive developments. Often, these hurdles reflect fundamental differences between policy-making in democratic, market-oriented societies and the Chinese policy process. Some of these problems include:

- *An overwhelming lack of transparency.* Within government, only a tiny fraction of officials appears to have even rudimentary knowledge of either Chinese or multilateral export controls. Almost complete lack of knowledge about export controls exists, for example, in the small community of experts in nuclear nonproliferation issues, many of whom are involved in the transfer of nuclear goods and technologies. Export regulations are not freely available, often limited to a small circle of officials or the staff of a few trading companies, or not published at all. Government officials also provide little information on export controls to representatives of other governments or multilateral corporations.
- *Suspicious about the purpose of export controls.* Many Chinese believe that the United States, Japan, and other nations use export controls and the supplier groups to subvert Chinese national sovereignty and thwart its legitimate military and commercial interests. The many practitioners of Realpolitik in the PRC point to sanctions against China, leaks of inaccurate intelligence information on violations, demands for pre-license checks and post-shipment verification, arms shipments to Taiwan, discrimination between the “haves” and “have-nots” in nonproliferation regimes and other behaviors as evidence that export controls are meant to keep China weak. Supporting a strict view of sovereignty also makes Chinese officials reluctant to verify the assurances of end-users of its own technology exports.

Other problems stem from the transformation of the Chinese economy:

- *Increasing numbers of entities with authority to conduct foreign trade.* According to Chinese officials, only a few foreign trading corporations (FTCS) have rights to trade in sensitive items (i.e., four–five in chemicals, two in nuclear, and one–two in missile items), which helps China maintain control on sensitive exports. These numbers apparently include not only large enterprises such as Great Wall, but also research institutes that first gained FTC status in 1993. This seems to underestimate the current number of entities involved in the transfer of dual-use items. Moreover, the number of entities gaining FTC status seems likely to grow at a rapid pace. As central control over many industries and enterprises wanes, the increase in private sector activity will no doubt put immense strains on the modest capabilities of the current export control system.
- *The increasing commercialization of many defense enterprises and research institutes has had some pernicious effects.* To increase working capital, some enterprises look to increase exports of military or sensitive dual-use items. Although the ratio of civilian to military production in defense enterprises has shifted dramatically in favor of civilian production (now about 80% civilian), this increased problems in verifying the end-use of sensitive items as military and civilian production lines can share many facilities, equipment and personnel. In addition, many Chinese assume that at least some defense officials transferred control over newly-created subsidiaries to family members, who then operate outside emerging legal and regulatory constraints with little fear of reproach.

### **Eliciting PRC Compliance in Nonproliferation Export Controls**

Integration of the PRC into the nonproliferation community through constructive engagement, as Ambassador James R. Lilley noted at a recent hearing, faces some severe limits. When the United States has sought to impose its views unilaterally or through threats of unlikely economic sanctions, we have failed to gain their cooperation. Even where well-focused sanctions proved effective (as in response to the initial M–11 transfers), the impact was transitory.

Given the differences in the political and economic systems in the PRC and the United States, close coordination on nonproliferation export controls is unlikely. Cooperation, however, remains a possibility. In the past, more permanent cooperation has emerged where the United States and the PRC share common security concerns, as in Afghanistan and North Korea. As for cooperation on nonproliferation issues with Iran and Pakistan, the United States might pursue some supplemental tactics in its current strategy to increase this sense of mutual interest.

- *Foster those elements of the Chinese government that see export controls as a means of reaffirming some central control over an increasingly decentralized economy.* Despite the risk of slowing the process of economic reform, proliferation is a higher priority on the U.S. national security agenda in the short and long term. In addition, the exercise of at least minimal control over exports is a prerequisite for even the most liberal of governments.
- *Seek a more compelling rationale for China to control its sensitive exports.* Many Chinese officials see the proliferation consequences of the transfer of arms and dual-use items outside East Asia as removed from its core military security interests. What is more important, proliferation concerns raised by these transfers are quite remote from its primary interest in strengthening the Chinese economy. If the United States could make a more compelling case that proliferation in the Middle East or South Asia, as well as in East Asia, would weaken the demand for Chinese exports and reduce foreign investment in China, then PRC officials might address the problem more aggressively.

Developing more U.S.-PRC cooperation will be more difficult than working with Russia in the post-Cold War era. Russia, in whatever rudimentary form, has become a democratic, market-oriented nation. Building a cooperative relationship with the PRC, however, should be less contentious than the U.S.-Soviet relationship. An exact Chinese equivalent to the successful Nunn-Lugar (Cooperative Threat Reduction) program for Russia is inappropriate, for example. Unlike Russia, the PRC has a booming economy coupled with an underdeveloped technology sector, military or civilian. Chinese officials are unlikely to adopt export control standards common to members of the suppliers groups because it identifies with a U.S. led security community (which it does not), nor because the United States or its friends and allies offer economic side-payments. The PRC might do so, however, if it sees that proliferation directly threatens its military security or its overall economic prosperity.

Fully integrating the PRC into the nonproliferation community, other than by transforming the PRC into a democratic, market-oriented country, requires the creation of a culture of nonproliferation in the PRC. Nurturing this culture will take considerable time, effort, and persistence by the United States and its allies, and success is not assured. At the same time, failing to draw the PRC into the nonproliferation community, much less driving it into the arms of rogue states, will sabotage nonproliferation efforts to great cost to the United States, its allies, and its friends.

## Endnotes

<sup>1</sup>Much of the evidence outlined here comes from interviews conducted by the author and a colleague in Chengdu and Beijing in November 1996. For a more detailed view of export controls in the PRC, see Richard T. Cupitt and Yuzo Murayama, *Export Controls in the People's Republic of China*, Occasional Paper (Athens, GA: Center for International Trade and Security, forthcoming). The Japan Foundation Center for Global Partnership and the University of Georgia provides support for this research.

<sup>2</sup>See Wendy Freiman, "New Members of the Club: Chinese Participation in Arms Control Regimes, 1980-1995," *The Nonproliferation Review*, 3, 3 (Spring-Summer 1996), pp. 15-30 for an excellent overall view of PRC nonproliferation policies.

<sup>3</sup>For an excellent, and succinct, discussion of these issues, see Joshua Michael Boehm and Zachary S. Davis, "The 1985 U.S.-China Agreement for Nuclear Cooperation: Moving Towards Implementation?" *CRS Report for Congress*, 97-440 ENR, Washington, DC: Congressional Research Service, The Library of Congress.

**Table 1: Comparison With Model Nonproliferation Export Control Systems**

(Based on 1996 data)

Political unit	Percent of elements in common with model system (raw score)	Percent of elements in common with model system (weighted score by importance of the element)
PRC .....	38.2	50.1
Taiwan .....	66	74.9
Hong Kong .....	86.1	91.6

Table I: Comparison With Model Nonproliferation Export Control Systems—Continued

(Based on 1996 data)

Political unit	Percent of elements in common with model system (raw score)	Percent of elements in common with model system (weighted score by importance of the element)
Japan .....	96.5	96.8
South Korea .....	89.6	90.5
Russia .....	79.9	82.1

Source: Richard T. Cupitt, "Nonproliferation Export Controls in East Asia," *The Journal of East Asian Affairs* (forthcoming) and Richard T. Cupitt and Yuzo Murayama, *Export Controls in the People's Republic of China*, Occasional Paper, Athens, GA: Center for International Trade and Security (forthcoming).

### Russia's Interests in Iran: Issues, Implications, and Policy Tools for the United States

[Prepared by Igor Khripunov, Associate Director, Center for International Trade and Security, University of Georgia, Athens, Georgia.]

Iranian parliament speaker Ali Akbar Nateq-Nouri's visit to Russia in April of 1997 provides an insight into a web of increasingly intertwined interests of these two countries. In the wake of the German court's decision implicating Iran in terrorism, President Yeltsin's statement that the present level of bilateral contacts with Iran "gives reason to believe that these relations will grow stronger and further develop" must be taken seriously as reflecting Russia's emerging geopolitical priorities. In addition to President Yeltsin, the Iranian guest—who is the most likely winner of the presidential election scheduled for May 23—was warmly received by a host of other high government officials and the leadership of the Federal Assembly. Potential benefits of Russia's evolving relations with Iran are readily acknowledged both by communists and nationalists, on the one hand, and by liberal reformers, on the other.

#### Close Neighbors

Signs of rapprochement between these two countries which are neighbors geographically despite the recent disintegration of the Soviet Union should not come as a surprise. However, the most recent visibly revived interest in Iran can be traced to the stage of relations between Russia and the West which is often referred to as "the end of the honeymoon." In January 1996 the then Russian Foreign Trade Minister said—echoing other similar statements—that Russia's new "strategic line" approved by President Yeltsin would focus on enhanced trade relations with China, India and Iran. Below is a list of the geopolitical and other realities that have driven and keep driving Russia closer to Iran:

- Faced with the prospect of NATO expansion Russia has been looking for other countries willing to share its sense of frustration and disapproval. While speaking on Moscow's television, Ali Akbar Nateq-Nouri condemned "the West's intrigue against the East" and backed Moscow's opposition to NATO expansion. According to a statement by Yeltsin's spokesman during the Russian-U.S. summit in Helsinki "If NATO expansion continues under the harshest and most negative scenario for us, Russia will have to review its foreign policy priorities. We are developing good relations with China and India and on some issues with Iran."
- Iran is a valuable asset to Russia in halting the northward march of the Taliban religious army in Afghanistan. Jointly with Russia, Tehran is supporting Afghanistan's northern warlords separating the Taliban from the former Soviet republics of the Southern tier. Iran has accused Taliban rulers of following a brand of Islam not in accord with the teachings of Koran. Also, Iran's current and future role in settling down the internal conflict in Tadjikistan is highly appreciated by Russia.
- Moscow views Iran as a natural ally in countervailing the emerging Azerbaijan-Georgia-Ukrainian alignment supported by Turkey. This alignment has a pro-Western and anti-Russian thrust. In this context Iran backs Moscow's position on the status of the Caspian Sea, limits the impact of Turkey in Central Asia and maintains increasingly good relations with Armenia with which Russia has successfully negotiated an agreement on its military presence.

- Russia's most influential nonmilitary interest groups have a stake in expanding economic and trade relations with Iran. The oil and gas industry—which is the largest contributor to the federal budget and has enjoyed, until very recently, the unchallenged protection of Prime Minister Victor Chernomyrdin—is about to receive a lucrative \$2 billion deal in Iran. Russia's aerospace industry is gaining ground in Iran including building a plant for the construction of IL-114 turbo-prop passenger planes. Samara-based Russian aircraft manufacturer Aviakor will sell to Iran Tupolev transport aircraft TU-154M and TU-154-100 for a total of \$100 million. It is estimated that Russian-designed or manufactured aircraft may soon account for about 70 percent of Iran's entire fleet. These two groups undeniably have a strong clout in the domestic politics.

### **Nuclear Cooperation**

Nuclear cooperation with Iran presents a special challenge. The Russian government is determined to move ahead with the construction of a nuclear power plant at Bushehr. The overwhelming majority of Russia's officials—especially those representing the nuclear industry—vehemently deny that this bilateral project may enhance Iran's potential in developing nuclear weapons. U.S. objections to the deal are dismissed as unreasonable and aimed at depriving Russia's nuclear industry of lucrative cash generating contacts. The relative influence of the Ministry of Atomic Energy, a principal promoter of nuclear cooperation with Iran, is based, among other things, on its being an important exporter of high-tech items which still constitute a small fraction of Russia's total. The Ministry symbolizes one of the few remaining trappings of Russia's former status as a great power. One of the very few critics of the Iranian deal is Aleksei Yablokov, a well known Russian environmentalist who believes that the completion of the nuclear station at Bushehr in combination with the training of the personnel could give Iran access to the technology that would facilitate the development of nuclear weapons.

In the view of other Russian observers, the threat of nuclear proliferation in Iran should be taken quite seriously but there is no need for Russia to rescind the contract worth \$800 million or more because eventually other potential contractors may step in. According to this line of thinking, Russia, as an exporter of reactors, has the right to insist on tough conditions for the verification of peaceful uses of equipment supplied to Iran as provided for under the IAEA safeguards or even its own stricter standards. This should primarily involve a thorough detailing of procedures for overseeing the process of loading and unloading the nuclear fuel. Russia should also demand that spent fuel assemblies be sent to Russia for reprocessing and should require continuous monitoring by Russian specialists of the operation of the Bushehr nuclear power station, and Russian inspections of other Iranian nuclear facilities. Russia's intelligence and security services must focus on Iran and cooperate with their counterparts in the West in sharing information on Iran's nuclear projects.

There have been two recent developments that potentially mitigate the impact and future risks. The Russian government approved in 1996 two sets of export procedures, one for controlling the export of nuclear dual-use equipment and materials (government edict No. 575 of May 6, 1996) and the other for controlling the export and import of nuclear materials, equipment, special nonnuclear materials and relevant technologies (No. 574 of May 8, 1996), as a result of which Minatom has lost its previously unchallenged role. In the past, this ministry played the "first fiddle" in approving nuclear export operations while other interagency participants played secondary roles or were even kept in the dark. In 1992, taking advantage of its monopoly position under previous government edicts, the Ministry of Atomic Energy entered into negotiations with Iran on completing the Bushehr nuclear power station. The first Russian-Iranian MOU was concluded by minister Victor Mikhailov on his own authority. Now, it is the interagency EXPORT CONTROL commission, rather than the Ministry of Atomic Energy, that is responsible in the framework of the new 1996 procedures for issuing findings as to the eligibility of exporting items with a high risk of proliferation.

Secondly, Russia and Iran finalized and signed in April 1997 a memorandum of understanding on export controls which according to Russian Foreign Minister Evgenii Primakov would finally dispel fears that Moscow's relations with Iran "contradict international standards." Of course, it remains to be seen how effective these arrangements will be in practice and to what extent Russia will be willing to enforce their provisions.

### **Weapons Deals**

Russian arms exporters consider Iran one of their best customers after India and China. In 1996, Russia's military contracts with Iran reached \$1 billion. According



to a source in Russia's weapons exporting agency "Rosvooruzhenie," Iran has been traditionally oriented toward Russia as weapons supplier and the Russian government intends to maintain this course. "Rosvooruzhenie" has its full-time representative in Tehran. By comparison, in 1996 Russia exported conventional weapons worth more than \$3.4 billion—continuing the increase from \$1.7 billion in 1994 to \$3 billion in 1995. Last year the Russian government announced a special program aimed at boosting weapons export before the end of the century to \$10 billion.

However, under the existing tradeoff, Russia was admitted to the Wassenaar Arrangement (COCOM's replacement) as a founding member in exchange for its commitment not to sign new weapons deals and to halt weapons exports to Iran after the expiration of the ongoing agreements, i.e., by 1999. Currently, export licenses for weapons are considered and issued by the Ministry of Foreign Economic Relations and Trade in coordination with the Ministry of Defense. However, smuggling and unauthorized deals are rampant. One recent example is illegal deliveries to Armenia in 1996 of over \$1 billion worth of heavy weapons including tanks and, reportedly, SCUD missiles and launchers. Russia's General Prosecutor's Office is investigating this case.

It has also been reported that small quantities of ready-made missiles (S-4 Sandal or SS-23) along with the technology, components, material and expertise to expedite Iranian indigenous efforts were delivered to Iran "from the North." Russian officials denied this charge claiming that "no contracts on a government-to-government level involving the sales to Iran of missile technologies of any type ever existed." Any evidence challenging this statement would put into question Russia's compliance with the INF Treaty and/or the Missile Technology Control Regime (MTCR) to which it is a party. Otherwise, three other explanations are possible: Iran's technological espionage; smuggling from Russia; transfers of SS-4 technologies from Ukraine, Belarus, Kazakhstan or Uzbekistan (none of these latter states are parties to the MTCR).

#### **Russia's Export Controls**

Because Russia inherited the Soviet nonproliferation bureaucracy, it has had export control structures, personnel and policy upon which to build. Since 1992 it has developed an impressive array of decrees, control lists, and agencies tasked to control weapons and weapons related exports. Russia has harmonized its export control lists (nuclear, missile, chemical, biological, and dual-use) with those of the international regimes and has joined all of them (Nuclear Suppliers Group, Missile Technology Control Regime, and the Wassenaar Arrangement), except the Australia Group, as a full-fledged member.

In April 1992 an interagency commission on export control (Russia's EXPORT CONTROL) was established to provide coordination as well as organizational and methodological supervision over export control operations. The key ministries and agencies, such as the Ministry of Foreign Affairs, Ministry of Defense, Ministry of Foreign Economic Relations and Trade, Ministry of Economics, Foreign Intelligence Service, Federal Security Service and others are represented in the Commission at the level of heads or deputy heads. A First Deputy Prime Minister chairs the Commission. The working body of Russia's export control mechanism providing technical support for EXPORT CONTROL is the Federal Service for Currency and Export Control which currently enjoys the status of a ministry.

Though there is no specific export control legislation, the Law on State Regulation of Foreign Trade Activity adopted in 1995 filled in some gaps as an umbrella law. Article 16 of this law specifies that the export control system was established to defend Russia's national interests while conducting foreign economic activity, and for compliance with Russia's international obligations on nonproliferation of WMD and other weapons. According to the law, selected types of arms, military hardware, some types of raw materials, and equipment, technologies, scientific and technical information and services that are or can be used for developing WMD, missile delivery systems and other weaponry, are determined by the lists established by presidential decrees. The decrees come into force not earlier than three months after their official publication. The procedures for implementing these decrees are approved by decisions of the government. These two types of documents constitute the normative and legal basis of Russia's export control.

All commercial entities, regardless of form of ownership, are required to receive permission for exporting controlled goods and services. This entails the issuance of an export license necessary for customs clearance. The Ministry of Foreign Economic Relations and Trade or its agents issues export licenses in different regions of the country. The decision to issue an export license depends upon the finding of Russia's EXPORT CONTROL as to the eligibility to export controlled goods or services. Specialists of the Federal Service for Currency and Export Control or outside experts

prepare findings after required interdepartmental analyses of necessary documents and circumstances surrounding the export deal are submitted.

As specified by current regulations, the exporter must produce a guarantee from an importer to utilize dual-use goods and services strictly for declared purposes not related directly or indirectly to designing and developing weapons of mass destruction or their missile delivery systems, and not to re-export them to third countries. These requirements constitute one of the necessary conditions for receiving Russia's EXPORT CONTROL permission to export dual-use goods or services.

The system of providing such guarantees for domestic use in Russia includes procedures for issuing a Russian Import Certificate, Delivery Verification Certificate, and End-User Certificate which would formally register the obligations of Russian enterprises and organizations as to the import of dual-use goods and services into the Russian Federation, their use for the declared purposes, nontransfer to other business entities on the Russian territory, and nonreexport to third countries.

Despite Russia's laudable efforts to create an interagency system for export licensing and the execution of export control policy, the system is the scene of continuous revamping and bureaucratic in-fighting. Russia's system of export control continues to be severely under financed and understaffed. In a state with so much weaponry and weapons-related trade to license and control, there is insufficient money and well trained personnel for export control. The legitimation and overall status of Russian nonproliferation export control institutions and policy have to be enhanced in order to perform as required.

The enforcement side of Russia's export control system is still weak. Article 189 of the new Criminal Code makes punishable illegal export of technologies, scientific-technical information and service which can be used for developing weapons of mass destruction, their delivery means, weapons and military hardware with regard to which special export controls have been established. The punishment as specified by this article is a fine equivalent to a minimum of seven hundred to one thousand dollars, or the total salary or other income drawn by the convicted person for a period of seven months to one year, or imprisonment from three to seven years. Although the previously enacted Criminal Code contained a similar provision, there has been little evidence of prosecutions.

There is also a problem of transparency in the export control arena. Whether the opacity stems from fear that admitting weakness would threaten Russia's status or just a legacy of Soviet sensitivities remains unknown. However, little information is available on statistics surrounding license applications and denials. The Russian representative to the NSG from MINATOM has yet to report even one denial to the regime, which maintains a database of denials to ensure that NSG partners do not undercut one another. The lack of transparency also leaves exporters confused and frustrated at overcoming numerous and unexpected bureaucratic hurdles.

Other major obstacles in the way of efficient export controls are organized crime and corruption, as well as porous borders.

Reintegration trends manifesting themselves throughout the CIS may further complicate things. Kyrgyzstan has joined the recent customs union between Russia, Belarus and Kazakhstan, with Uzbekistan and possibly Tajikistan joining. Both Uzbekistan and Tajikistan have controls that are even less sophisticated. The original CIS configuration comprising sovereign states posed considerable proliferation risks, and the same can be said for turning the CIS into a single economic space with some of its parts seriously lacking export control expertise and systems. According to certain Russian Customs Committee sources, eliminating Russian customs posts would open the floodgates to drugs from Central Asian republics and the unrestricted export of Russian strategic materials. Once goods flow into Kazakhstan and Central Asia, it is difficult to determine where they will go. The Caspian Sea and other Central Asian borders are particularly accessible to smuggling operations to Iran.

Russia and other NIS lack a culture of nonproliferation that helps restrain individuals and enterprises from transferring sensitive items to countries or groups of concern. Russia will need to undertake major education and outreach programs within the Military Industrial Complex (MIC) as more and more enterprises receive the freedom to export. Export controls under the former system of state monopoly were much easier to enforce than they will be within a privatized system with hundreds of aggressive, export dependent firms. Russian officials have recently acknowledged the importance of developing export compliance programs in such firms, but they clearly lack money and manpower for the implementation of such vitally important programs.

Undoubtedly, the Russian export controllers will have a difficult sell. Many industrialists view export control as a tool that was once used by the West to deny Russia critical technologies and now one that is being used by the West to deny Russian

companies foreign market share. Despite arguments that export controls will allow Russian firms to trade internationally and elevate Russia to the status of a reliable partner in global nonproliferation efforts, many industrialists and some members of the Duma see Russia emerging as the loser because many of its old client states including Iran are now the target of multilateral export control regimes.

### Conclusions

Russia will continue to gravitate toward the East including Iran, unless the controversy over the NATO expansion is resolved to the mutual satisfaction of both sides. If, concurrently with the signing of a NATO-Russia charter, efforts are made in a consistent manner to get Russia fully integrated into other institutions (e.g., G7, World Trade Organization and Paris Club) there will be powerful incentives for the Russian government to be sensitive to Iran-related concerns and leverages for the West to downsize Russian-Iranian cooperation.

As to the Bushehr project specifically, halting Russia's involvement may be a difficult challenge unless hard evidence is produced implicating Iran in the development of nuclear weapons. In the absence of this, two possible options can be explored. First, the United States will make available to Russia adequate funding and sophisticated instruments in order to develop and deploy at Bushehr an unprecedentedly stringent monitoring system. Increased presence of Russian personnel on a continuous basis would be, among other things, an additional hedge against possible diversion. Secondly, Russia has expressed its willingness to participate in the Korean Energy Development Organization (KEDO) whose objective under the agreement between Washington and Pyongyang is to replace heavy-water reactors built earlier in North Korea under the Soviet assistance with light-water ones. Russia's Nuclear Energy Minister Victor Mikhailov set two conditions for such participation: that all Russia's previous investments of about \$50 million in the development of North Korea's nuclear energy sector be counted as its contribution to this international project and that Russia be accorded a deputy chairman position on the equal footing with South Korea and Japan. There are grounds to believe that if the Bushehr project for some reasons slows down, Russia will be even more willing to seek a compromise in the KEDO framework backing off from the Bushehr project.

Reports on missiles and missile technologies transfers to Iran from the former Soviet Union must be treated with utmost seriousness as possible violations of the INF Treaty and/or MTCR. The United States has the right to seek information and raise these issues through established channels. If this case is proved to be a result of the ineffectual operation of Russia's export control system or negligence, efforts could be made to rectify the situation and until then the West may be willing to go as far as freezing Russia's membership in the international fora requiring as a precondition effective export controls.

It is unlikely that strictly unilateral actions by the United States against a Russian producer or supplier involved in a questionable deal (similarly to the arrangements against Glavcosmos in the framework of Soviet/Russian-Indian cryogenic agreement) would produce results consistent with the U.S. security interests. For example, any sanction against MINATOM would potentially halt security assistance under the Nunn-Lugar program covering a wide range of important projects including the fissile materials storage facility. Also, unilateral sanctions against Russia would give rise to anti-American feelings, play into the hands of communists and nationalists and risk to wreck a NATO-Russian charter should it materialize in the near future. Conversely, agreed upon multilateral sanctions have a much better chance for success given Russia's good record of compliance with them.

## Chinese and Russian Suppliers to Iran

*[Information submitted by Gary Milhollin, Wisconsin Project on Nuclear Arms Control, Washington, D.C.]*

### CASE #1

PRODUCT: C-801 and C-802 Anti-Ship Missiles

SUPPLIER: China Precision Machinery Import-Export Corporation (CPMIEC)

*Comments:* Iran has been steadily increasing its military presence in the Persian Gulf, and according to Admiral John Redd, Commander of U.S. naval forces attached to the Central Command, has tested a ship borne C-802 anti-ship cruise missile in January 1996. These missiles are deployed on Hudong Fast Attack Craft also supplied by China in 1994. Iran is believed to have obtained about 60 of the

missiles, which are capable of destroying a warship, and could also pose a significant threat to commercial shipping in the Gulf. Iran reportedly tested a shore-launched C-802 in December 1995.

The China Precision Machinery Import-Export Corporation (CPMIEC) manufactures and markets the C-802. It is a long range, sea-skimming, multi-purpose anti-ship missile, powered by a turbojet engine. It can be deployed on warships, coastal bases, and aircraft. It can carry a warhead at high subsonic speed (Mach 0.9) to a range of 120 kilometers (75 miles) and is considered to be more sophisticated than the older Silkworm.

Iran has also obtained and deployed the C-801 anti-ship missile from CPMIEC. The smaller C-801 has a range of 40 kilometers and can also travel at high subsonic (Mach 0.9) speeds.

China Precision Machinery was sanctioned by the U.S. government in August 1993 for missile proliferation activities.

*U.S. Exports:* U.S. Commerce Department records show that the following items were approved for export to CPMIEC from 1989 to 1993:

- computer equipment for color enhancement—\$19,502
- modems for data transmission—\$32,628
- modems for data transmission—\$6,630
- replacement parts for a numerical control system—\$11,698
- controller—\$455,000
- cables and adapters for a macro ware system—\$45,834
- mechanical seals for pumps—\$11,949
- spare navigational instruments—\$83,762
- machine parts—\$385,000
- computer workstation for simulation of wind effects—\$43,700
- flight data recorder and spare parts—\$28,442
- analyzers—\$4,876
- computer equipment—\$7,707
- TOTAL: \$1,136,728

## CASE #2

PRODUCT: JY-14 Three-Dimensional Tactical Air Surveillance Radar

SUPPLIER: China National Electronics Import-Export Corporation (CEIEC)

*Comments:* According to U.S. Naval Intelligence, Iran recently acquired this tactical air surveillance radar from China. It can provide long-range tactical surveillance as part of an automated tactical air defense system. It can detect targets up to 300 kilometers away and at altitudes up to 75,000 feet, even when subjected to high electronic clutter or jamming. The system also provides automatic tracking and reporting of up to 100 targets. CEIEC also manufactures cryptographic systems, radars, mine detection equipment, fiber and laser optics, and communications technologies and is overseen by the Ministry of Electronics Industry (NMI), which is also known as the China Electronics Industry Corporation (CEIC) or Chinatron.

*U.S. Exports:* U.S. Commerce Department records show that the following items were approved for export to CEIEC from 1989 to 1993:

- radio communication service monitor—\$21,754
- computer equipment and software—\$4,375,000
- personal computers and processor boards—\$1,579,830
- protocol tester for telecommunications—\$4,100
- equipment for basic microwave research—\$10,916
- traveling wave tube amplifier—\$33,600
- microwave frequency counter—\$6,124
- statistical multiplexer systems and accessory boards—\$75,632
- statistical multiplexers for use in data communications network—\$65,120
- integrated circuits—\$17,326
- computer equipment—\$46,022
- computer equipment—\$29,094
- equipment for circuit board design—\$9,580
- computer chips—\$1,820
- computer software—\$105,000
- equipment for semiconductor manufacture—\$107,000
- equipment for sweep generators for resale to Ministry of Machine Building and Electronics Industry—\$32,000
- equipment for semiconductor wafer testing—\$82,610
- computer equipment—\$1,924
- computer equipment—\$10,457
- computer equipment for oil reservoir numerical simulation—\$92,916

- computer equipment—\$32,500
  - switching exchanges—\$1,269,047
  - phosphorus oxychloride (nerve gas precursor) for transistor manufacture—\$7,397
  - export telephone system—\$15,000
  - circuit design software—\$243,160
  - VLSI system to test integrated circuits—\$1,315,000
  - transistors and amplifiers—\$13,648
  - electronic equipment—\$32,610
  - equipment for electronic component testing—\$60,000
- TOTAL: \$9,696,117

### CASE #3

PRODUCT: Tokamak Nuclear Fusion Reactor

SUPPLIER: Chinese Academy of Sciences, Institute of Plasma Physics

*Comments:* The Chinese Academy of Sciences' Institute of Plasma Physics transferred a HT-6B Tokamak nuclear fusion research facility to the Azad University in Tehran in 1993-94. The Institute designed and developed the Tokamak in the mid-1980s and successfully operated the unit for 10 years, after which it was transferred to Azad. In 1994, the Institute sent technicians and engineers to Azad to assist in the unit's installation and debugging, with the understanding that the two sides would continue joint nuclear fusion research in the future.

*U.S. Exports:* Despite being a well-known contributor to Iran's nuclear program, the Academy of Sciences managed recently to import an American supercomputer. In March 1996, California based Silicon Graphics Inc., sold the Academy a powerful supercomputer without bothering to obtain a U.S. export license. In addition to supplying Iran, the Academy has helped develop the flight computer for the Chinese DF-5 intercontinental missile, which can target U.S. cities with nuclear warheads. The Academy's Mechanics Institute has also developed advanced rocket propellant, developed hydrogen- and oxygen-fueled rockets, and helped develop the nose cone for the nuclear warhead of the DF-5. Its Shanghai Institute of Silicate successfully developed the carbon/quartz material used to shield the tip of the DF-5's reentry vehicle from the heat created by friction with the earth's atmosphere. The Academy's Institute of Electronics has built synthetic aperture radar useful in military mapping and surveillance, and its Acoustic Institute has developed a guidance system for the Yu-3 torpedo, together with sonar for nuclear and conventional submarines.

In the nuclear field, the Academy has developed separation membranes to enrich uranium by gaseous diffusion, and its Institute of Mechanics has studied the effects of underground nuclear weapon tests and ways to protect against nuclear explosions. It has also studied the stability of plasma in controlled nuclear fusion. Its Institute of Electronics has developed various kinds of lasers used in atomic isotope separation.

### CASE #4

PRODUCT: Uranium Mining Exploration

SUPPLIER: Beijing Research Institute of Uranium Geology (BRIUG)

*Comments:* BRIUG conducts scientific exchanges with Iranian and Pakistani nuclear scientists.

As part of the China National Nuclear Corporation (CNNC), BRIUG carries out research on radio metrical and conventional geophysical uranium prospecting methods and conducts geological interpretations throughout China using satellite images. It develops and designs spectrometers, laser fluorometers for trace uranium analysis, mineral inclusion analyzers, scintillation radon analyzers, scintillation spectrometers, laser analyzers for trace substances, and high and low frequency dielectric separators. BRIUG also conducts research on geological disposal of nuclear waste, and possesses scientific equipment including neutron activation analyzers, electron microscopes, electron microprobes, mass spectrometers, X-ray fluoro-spectrometers, X-ray diffractometers, infrared spectrophotometers, ultraviolet spectrophotometers, atomic absorption spectrophotometers, laser raman spectrophotometers, fluoro-spectrophotometers, gas chromatography analyzers, fluid chromatography analyzers, image processing system and computer and color plotter systems.

BRIUG's parent, CNNC has been implicated in the sale of ring magnets to the A. Q. Khan Research Laboratory in Pakistan, which enriches uranium for nuclear weapons. CNNC is also involved in the development of Pakistan's secret research

reactor at Khusab and a CNNC subsidiary is currently constructing a power reactor for Pakistan at Chashma.

#### **CASE #5**

PRODUCT: High-Grade Seamless Steel Pipes

SUPPLIER: Rex International (Hong Kong)

*Comments:* Owned by China North Industries (Norinco), Rex is known to have acted as a broker for numerous deals between Norinco and the Middle East. Rex reportedly handled a shipment of high-grade seamless steel pipes, suitable for use in chemical or explosives manufacturing, to an Iranian chemical weapon plant. The consignee was Iran's Defense Industries Organization (DIO), a notoriously bad destination. The pipes were reportedly shipped from Spain to Hong Kong and then to the Iranian port of Bandar Abbas.

Rex International Development was founded in 1982 as a joint venture between Hong Kong entrepreneur T. T. Tsui and Norinco. It functioned as a broker for Norinco's business in commercial high explosives, served as Norinco's window on the world arms markets and as a link to the international financial system through Hong Kong.

Employees of Norinco were indicted in 1996 by the United States for illegally conspiring to import 2,000 fully automatic AK-47 assault rifles into California intended for street gangs. In addition to AK-47s, Norinco develops and manufactures armored fighting vehicles, howitzers, mortars, rocket launchers, antiaircraft weapons, anti-tank missile systems, small arms, ammunition, radars, sighting and aiming systems, high-performance engines, and nuclear/biological/chemical warfare protection systems, sensor-fuzed cluster bombs, optical-electronic products, explosives and blast materials, light industrial products, fire-fighting equipment, and metal and non-metal materials. Norinco was established in 1980 with the approval of the State Council of China, and is overseen by the Commission on Science, Technology and Industry for National Defense (COSTIND). Norinco subsidiaries in the U.S. include: Beta Chemical, Beta First, Beta Lighting, Beta Unitex, China Sports (California), Forte Lighting, Larin, NIC International (New Jersey).

#### **CASE #6**

PRODUCT: "Silkworm" Anti-Ship Missiles

SUPPLIER: China Nanchang Aircraft Manufacturing Corporation

*Comments:* Iran has deployed Chinese HY-2 "Silkworm" anti-ship missiles along the Iranian coast of the Persian Gulf, on the island of Abu Musa in the middle of the Persian Gulf, on Qeshm Island and Sirri Island. The missiles are Chinese modifications of the Soviet SS-N-2 Styx missile, and can carry 1000 lb. warheads over a range of 50 miles at high subsonic (Mach 0.85) speeds. They can be equipped with either radar or infrared guidance systems, and thus can threaten U.S. and other ships transiting the Persian Gulf and the Strait of Hormuz, through which one-fifth of the world's oil supply passes. Iran used Silkworms during its war with Iraq to attack shipping in the Gulf. Iranian forces fired an improved version of the Silkworm missile during military exercises in late November 1996.

*U.S. exports:* U.S. investigators believe that CATIC (China National Aero-Technology Import-Export Corporation), a powerful state-owned Chinese company, intentionally misled American officials in order to import sensitive American machine tools that were later diverted to forbidden military purposes. CATIC, China National Aero-Technology and China National Supply and Marketing Corporation imported the machines under export licenses issued by the U.S. Commerce Department with the stated purpose of making civilian aircraft. The machines had been used previously to make parts for the B-1 strategic bomber. The machines were shipped to China between September 1994 and March 1995 by the McDonnell-Douglas Corporation and were destined for CATIC's Beijing Machining Center. The Machining Center, however, did not exist at the time the licenses were granted and was never created. Instead, the tools were illegally sent to other locations, including the China Nanchang Aircraft Manufacturing Company, maker of the Silkworms.

### **Iranian Nuclear, Biological and Chemical Weapons: Implications and Responses**

*[This paper was prepared by Dr. W. Seth Carus for presentation on February 20, 1997, before the Iran study group of the Nixon Center for Peace and Freedom. It rep-*

*resents the views of the author, and not necessarily those of the Center for Naval Analyses, the Department of the Navy, or the Department of Defense.*

The United States currently characterizes Iran as one of several so-called "rogue" states that possess programs to develop weapons of mass destruction, which include nuclear, biological, and chemical (NBC) weapons. Since the 1990–1991 confrontation with Iraq, these weapons are viewed in Washington as a threat to the security of the United States and its friends and allies.

Iran is said to possess chemical and biological weapons, and the means to deliver them, and is reportedly working to acquire nuclear weapons. Given the enmity that exists between the United States and Iran, and the possibility that military hostilities could erupt between the two countries, these Iranian weapons programs are a source of serious concern to policy-makers in Washington.

In this short essay, I will briefly examine three issues that help provide a better understanding of the implications of the Iranian NBC program for the security of the United States and of the Middle East.

First, what is Iran doing in the NBC and delivery system arena, and why is it pursuing those objectives?

Second, what are the implications of these capabilities for the United States, for its allies and friends in the region, and for others?

Third, what steps should the United States take in response to Iranian activity?

#### **Iranian NBC and Missile Programs**

What follows is a summary of what is known about Iran's NBC programs, focusing primarily on U.S. government assessments. There have been numerous surveys of Iranian activities; no effort will be made here to repeat what others have done more thoroughly.<sup>1</sup> Rather, I will concentrate on the officially stated views of the U.S. government, since such statements reflect the intelligence reporting that guides policymaking. However, I will assess the validity of the official assessments to determine whether there is reason to be skeptical of the official views.

##### *Official assessments*

Iran's nuclear weapons program originated prior to the 1979 revolution. It fell apart during the revolution, and was resuscitated only in 1989 after the end of the Iran-Iraq War. According to a recent Department of Defense estimate:

At this stage, Iran's scientific and technical base remains insufficient to support major nuclear programs. The Iranians recognize their dependence on foreign assistance and are encouraging younger Iranians to study abroad to gain needed technical assistance.<sup>2</sup>

Similarly, ACDA gave the following assessment of Iran's nuclear activities: "Although Iran's rudimentary program has apparently met with limited success so far, we believe Iran has not abandoned its efforts to expand its nuclear capabilities with a view to supporting nuclear weapons development."<sup>3</sup> In 1993, the Central Intelligence Agency calculated that Iran could develop a nuclear weapon in eight to ten years. More recently, the Secretary of Defense stated that it might take Iran from seven to fifteen years to develop a weapon.

The Department of Defense reports that Iran's chemical weapons program started in 1983 as a response to Iraq's use of chemical weapons. They produced their first chemical agent in 1984, but cumulative production is "a minimum several hundred tons of blister, blood, and choking agents."<sup>4</sup> Some sources have claimed that the Iranians might have as much as 2,000 tons of chemical agent, possibly including nerve agent.<sup>5</sup>

Iran's biological weapons program also was initiated in the early part of the war with Iraq. According to the Department of Defense, Iran "is conducting research on toxins and organisms with biological warfare applications."<sup>6</sup> According to the Arms

<sup>1</sup>Excellent accounts have appeared in the works of Anthony Cordesman, Michael Eisenstadt, Ahmad Akhim, and Leonard Spector.

<sup>2</sup>Office of the Secretary of Defense, *Proliferation: Threat and Response* (Washington: Government Printing Office, April 1996), p. 14.

<sup>3</sup>Arms Control and Disarmament Agency, *Adherence to and compliance with Arms Control*, May 1996.

<sup>4</sup>Office of the Secretary of Defense, *Proliferation: Threat and Response* (Washington: Government Printing Office, April 1996), p. 15.

<sup>5</sup>Andrew Rathmell, "Chemical weapons in the Middle East—Lessons from Iraq," *Jane's Intelligence Review*, December 1995.

<sup>6</sup>Office of the Secretary of Defense, *Proliferation: Threat and Response* (Washington: Government Printing Office, April 1996), p. 16.

Control and Disarmament Agency, Iran probably has produced biological warfare agents and apparently has weaponized a small quantity of those agents.<sup>7</sup>

*Assessing the assessments*

What are we to make of these assessments?

Notwithstanding the official assessments, I remain intensely skeptical about the ability of the Iranians to match their achievements to their ambitions.

My skepticism reflects in part the singular lack of success of the Iranians in pursuing ballistic missile programs. The Iranian ballistic missile program dates to at least 1987. Although Iranian officials claimed that the program had a high priority in early 1988 during the so-called "War of the Cities," there is no evidence to suggest that Iran has been able to produce a single guided missile of indigenous design. Indeed, Iran's entire inventory is composed of foreign-supplied missiles, except for some missiles assembled in Iran from kits provided by North Korea. Clearly Iran has ambitions to produce its own ballistic missiles, including more accurate systems with greater range. Equally clearly, however, it has found it difficult to make significant progress in its efforts to do so.

Iran initiated a Scud production program in 1987. The Scud missile is based on primitive technology dating to the 1940s. Indigenous efforts to develop the Scud failed, and in the end the Iranians were forced to go to North Korea for assistance. Given that there is nothing in Scud technology that should be inaccessible to the Iranians, this strongly suggests that Iran has considerable difficulty in systems integration. Accordingly, one should be skeptical of blithe claims that Iran will quickly implement design efforts to develop more sophisticated systems.

This is evident from what appears to be a diminished level of concern regarding the immediacy of Iran's efforts to acquire nuclear weapons. This reflects the extent of the problems that face Iran as it attempts to develop an indigenous nuclear weapons program. Iran lacks the infrastructure needed to produce fissile material, and it will take some time for it to acquire both the facilities and the expertise to do so. Thus, the primary threat comes from illicit acquisition of either fissile material or complete weapons from the stockpiles of the former Soviet Union. It is impossible to assess the possibility that Iran could acquire a nuclear capability through this route. U.S. policymakers have given a high priority to efforts to forestall such attempts.

Unfortunately, it will be difficult to verify Iranian possession of nuclear weapons if it uses covert means to acquire the fissile material or the complete weapon. As a result, we may be faced with a circumstance in which Iran might have a nuclear weapons capability and we would have no means of confirming the claim. This could be especially problematic if the Iranians allowed rumors of nuclear weapons to reach other countries, while publicly maintaining that it had no such capabilities. Conversely, the Iranians could try to make people think that they had nuclear weapons, even without actually having them. In either case, the United States should expect to face an increasingly ambiguous military and diplomatic challenge arising from Iran's nuclear program.

Iran is credited with more success in its efforts to acquire chemical and biological weapons. It has a stockpile of chemical agents, and may have weaponized biological weapons. Estimates of Iranian chemical weapons stockpiles should be treated with some caution. While the size of the stockpile is potentially of military significance, the quality of it is uncertain.

Some portion of Iran's chemical weapons inventory is reported to be composed of hydrogen cyanide.<sup>8</sup> There is only one problem with this attribution: there is no evidence that anyone ever made hydrogen cyanide into an effective chemical agent. Cyanide gas was extensively used by the French during World War One, but German accounts suggest that it probably caused no casualties. Indeed, the body naturally detoxifies hydrogen cyanide and it is lighter than air, so that it is difficult to produce concentrations sufficiently great to incapacitate. Equally important, the US found that the burster charges in aircraft bombs needed to disperse the hydrogen cyanide often ignited the agent.<sup>9</sup>

<sup>7</sup>Arms Control and Disarmament Agency, *Adherence to and Compliance with Arms Control*, May 1996.

<sup>8</sup>Office of the Secretary of Defense, *Proliferation: Threat and Response* (Washington: Government Printing Office, April 1996), p. 15.

<sup>9</sup>For the First World War experience with hydrogen cyanide, see L. F. Haber, *The Poisonous Cloud: Chemical Warfare in the First World War* (Oxford: Clarendon Press, 1986), and Augustin Prentiss, *Chemicals in War: A Treatise on Chemical Warfare* (New York: McGraw-Hill Book Company, 1937), p. 17. World War Two research is discussed in Stanford Moore and Marshall Gates, "Hydrogen Cyanide and Hydrogen Chloride," pp. 7-16, in Division 9, National Defense

Continued



There is one other significant point to make about hydrogen cyanide as a chemical agent. It is significantly less effective than other chemicals. According to one estimate, twenty tons of hydrogen cyanide is needed to equal the military effectiveness of one ton of sarin nerve agent. Thus, if Iran possessed 100 tons of hydrogen cyanide, it would have the operational significance of only five tons of sarin.

This discussion of hydrogen cyanide illustrates an important point. Possessing a chemical agent is not the same as possessing a militarily useful war fighting capability. Indeed, the history of chemical warfare is replete with examples of technical surprises, where the chemical agent does not operate as anticipated, or operational ineptitude, where the employment of the agent significantly reduced its operational effectiveness.

Moreover, the Iraqi experience also suggests some caution in evaluating chemical weapons inventories. Iraq apparently had great difficulty manufacturing and storing sarin, its standard nerve agent. UNSCOM reporting suggests that the sarin deteriorated after production because of impurities in the agent and poor storage techniques. For that reason, it adopted a binary combination that was storable and could be used to generate an extremely impure version of sarin immediately prior to use.

There is no reason to believe that the Iranians would not face similar obstacles in their efforts to produce chemical weapons capabilities. Given the limited employment of chemical agents attributed to the Iranians during the Iran-Iraq war, there is no reason to believe that the Iranians gained the operational experience needed to teach them how to effectively use their chemical weapons.

This discussion suggests several conclusions. The Iranians have been forced to rely on an ineffective agent that probably is for some (unknown) part of its chemical agent inventory. It also illustrates the extent to which it is possible to exaggerate the operational significance of a chemical inventory if sufficient attention is not given to the technical details of the arsenal in question.

These comments are not intended to minimize concerns for Iranian efforts to develop NBC capabilities. Rather, they are intended to put those efforts into some kind of reasonable perspective. NBC capabilities should be evaluated with the same critical eye that any military capabilities are considered. Just as we do not equate possession of advanced weapons with possession of real military capabilities, so should we attempt to carefully assess the real military significance of Iranian chemical weapons inventories.

Very little can be said about the allegations of Iranian biological weapons development. We believe that biological weapons, if properly utilized, should pose a lethality similar to that of nuclear weapons. What we do not know is the extent to which the Iranians have solved all the problems associated with production and dissemination of biological agents. Without such knowledge, it is impossible to assess the true threat posed by Iran's biological weapons.

#### *Motivations*

There is limited data to support any sophisticated evaluation of Iranian motivations for developing NBC weapons. While there have been a few revealing statements by senior Iranian officials, we know little about the inner decision making process involving Iran's NBC program. As a result, we must rely primarily on imputed motives based on analysis. The one key exception to this are Iranian views of missiles. We have some interesting insights into Iranian thinking about missiles, because at one point (March 1988) the senior Iranian leadership was quite open about its views on these matters.

I would suggest that there are three factors that motivate Iran's NBC and missile programs.

First, it appears that the chemical and biological weapons programs and its efforts to acquire ballistic missiles were initiated in response to the Iraqi threat. Given subsequent revelations about the size and sophistication of Iraq's weapons programs, it is highly likely that concern for Iraq continues to motivate Iranian efforts.

Second, Iranians probably view NBC programs as affirmations of Iran's status as a regional power. Thus, there is a critical prestige element in the activities.

Finally, Iran also probably views its programs as a potential response to military threats from the United States and Israel.

The relative weight of these three items is difficult to assess. What is clear is that Iran has powerful motivations to maintain NBC and missile programs. In the absence of a potent security umbrella, Iran is likely to pursue NBC capabilities even in the absence of hostile relations with the United States and Israel. In particular,

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Research Committee, Office of Scientific Research and Development, Chemical Warfare Agents and Related Chemical Problems, parts I-II, Washington, D.C.: 1946).

until Iran's security concerns regarding Iraq are rectified, there is little prospect that Iran will unilaterally abandon its NBC programs.

If this assessment is correct, Iran's weapons programs may be targeted at the United States, but not exclusively. This suggests that even if there is a rapprochement between the United States and Iran, the rationale for the weapons programs will remain.

#### **Implications of Iranian NBC capabilities**

What are the implications of Iran's efforts to acquire NBC weapons, especially for the United States and its friends and allies in the Middle East?

##### *For the United States*

Iran has several alternative uses for its NBC capabilities against the United States. Iran could use the weapons to deter the United States from getting involved in a conflict with Iran. To implement such a strategy, Iran could threaten to use its weapons against U.S. forces deployed in the region, or it could threaten covert use of weapons against targets in the United States.

If deterrence fails and the United States attacks Iran, the weapons could be used to limit the scope of actions against Iran and the regime. Thus, Iran could threaten use of its arsenal if certain thresholds were crossed. In this way Iran could ensure that a limited war remained limited.

The weapons also could be used to drive a wedge between the United States and its friends and allies in the region. By suggesting that countries hosting the United States might come under attack from Iranian NBC weapons, Iran could ensure that no countries support U.S. military actions and that they do not allow the United States to operate from facilities in the region.

Finally, the weapons could be used as part of a war fighting strategy to compensate for Iranian conventional weapons deficiencies. Thus, Iran could target U.S. military forces, key facilities supporting U.S. operations in the Gulf, or critical reinforcement nodes.

There are limits on Iran's ability to employ these alternative strategies. Iran's leadership is certainly aware of the military capabilities of the United States, and would need to find an approach that minimized the risks of retaliation. Given the gross disparity in military power between the United States and Iran, this will certainly be evident to all but the most obtuse member of the regime. This tends to suggest that Iranian use of NBC weapons is most likely to be carefully considered and will involve a considerable degree of subtlety.

##### *For U.S. friends and allies*

The possession of NBC weapons adds to the threat that Iran already can pose to the GCC countries. These countries lack the military capability to oppose Iran on their own, and are heavily dependent on the protective shield offered by the U.S. military presence. Iran presumably would seek to use its NBC weapons to undermine the credibility and acceptability of the U.S. military presence. In particular, Iran would want the GCC countries to believe that by hosting the United States they are opening themselves up for NBC strikes.

Iran would have to adopt a carefully modulated approach, since the GCC countries will not want to become puppets of the Iranians. For their own survival, they must find ways of protecting their independence of action. If Iran is too blunt in its actions, the GCC countries would have incentives to side with the United States despite the risks. Thus, Iran needs to couple their threats with diplomatic initiatives that give the GCC countries some reason to believe that it will be possible to establish an acceptable relationship with Tehran.

#### **U.S. Responses**

What steps should the United States take in response to Iranian NBC efforts?

Generically, the United States takes three approaches to the proliferation of NBC weapons. First, it seeks to rollback existing capabilities. Second, it tries to inhibit further proliferation. Finally, attempts to manage the consequences of proliferated capabilities. All three approaches are relevant to United States approaches towards Iran.

##### *Rollback existing capabilities*

Efforts to roll back existing NBC programs have a higher priority today than in the past. This includes both the voluntary and involuntary destruction of capabilities. Current examples of such efforts include verification of the elimination of the Soviet BW program, of the Iraqi CBW and ballistic missile programs, and the South African nuclear program. A new requirement during the 1990s will be implementation of the Chemical Weapon Convention which will require such programs for the

numerous countries with arsenals of chemical munitions. Depending on circumstances, it may be necessary to ensure the elimination of nuclear, biological, and missile capabilities in other countries as well.

Rollback initiatives may be the primary responsibility of international agencies, such as the IAEA or the planned implementing agency for the CWC, or of the United States as party to bilateral and multilateral initiatives, as is the case with the Soviet BW program. Even when international agencies are involved, however, the United States will often take a leading role in providing support, or in monitoring the success of the international initiative.

Specialized resources are needed for inspection and destruction of equipment and facilities. This process needs to be tailored to the specific circumstances of each case. In most circumstances, there will be gaps in our knowledge of past activity, and as a result rollback efforts cannot be based on pre-set target lists. In addition, it is possible that concealment and deception will be used to protect selected aspects of programs. For these reasons, it is critical that experts intimately familiar with the activities of a program over an extended period of time be included in rollback efforts.

Recent experience indicates that it can be extremely difficult to uncover illicit weapons activities, even with highly intrusive verification efforts. While the UN inspectors in Iraq have accomplished much in the effort to control Iraq's NBC and missile programs, six years of intrusive inspections have yet to reveal the full scope of Iraqi activity. This suggests that we should not expect that arms control measures will be able to bring Iranian programs under control unless the Tehran regime wants to terminate those activities.

#### *Inhibit further proliferation*

A traditional focus of U.S. nonproliferation policy are efforts to prevent countries from acquiring nuclear, chemical, or biological weapons, or missiles capable of delivering such weapons. Because of the extent to which countries have acquired capabilities, however, a growing focus of such efforts are initiatives to prevent countries from enhancing the size and sophistication of existing arsenals.

Despite some failures, there have been considerable successes in our efforts to stem proliferation. Although more than two dozen countries might be capable of developing nuclear weapons capabilities, the actual number of nuclear capable states is relatively small. Similarly, we have successfully slowed the spread of chemical, biological, and missile capabilities.

In some cases, it may be possible to convince or force a country to stop programs before they become operational. This is the importance of the initiatives to halt the nuclear programs of Iran, Iraq, and North Korea, and was the reason for the importance of the efforts to stop the Argentinian and Brazilian nuclear programs and to prevent the spread of nuclear weapons among the newly independent states of the former Soviet Union.

In other cases, inhibiting proliferation means slowing programs, even though there is little reason to believe that they can be stopped. Thus, much of our activity in the chemical arena is intended to deny easy access to precursor chemicals needed to produce chemical agents, thus raising the costs and slowing pace of capabilities acquisition.

Often we are trying to buy time, hoping that changing circumstances will alter the cost-benefit assessment that encouraged the proliferation activity in the first place. Alternatively, the time allows us breathing space which can be used to develop counters to the capability.

These approaches are particularly relevant in the case of Iran. While the Iranians have made some progress in developing chemical and biological weapons, as well as missile delivery systems, their existing capabilities appear relatively rudimentary. Presumably, they have an incentive to acquire more sophisticated agents and better delivery mechanisms.

#### *Managing the consequences of proliferated weapons capabilities*

We may fail in our efforts to forestall proliferation. When that happens, it is necessary to manage the potentially deleterious consequences of the proliferation. In many cases, the task is primarily diplomatic. Thus, we have conducted an active diplomacy to manage the dangers posed by nuclear proliferation in South Asia, and may need to do more during periods of intense conflict.

In some cases, we may wish to adopt diplomatic initiatives intended to increase the costs or reduce the perceived benefits of possessing such weapons. This could entail providing defense assistance to allies (or even neutral and hostile countries, if appropriate), including CBW defenses and missile defenses. Alternatively, it could involve use of sanctions or military action by the U.S., depending on the circumstances.

With the Defense Counter Proliferation Initiative, the Clinton Administration recognized that it is possible that hostile third world nations might be willing to use their NBC arsenals against the United States or its friends and allies. This means we must be prepared to operate in localities where our forces may be vulnerable to such weapons.

#### *Iran specific policies*

Efforts by the United States to constrain Iranian NBC activities are consistent with general U.S. nonproliferation and counter proliferation policies. Since the early 1980s, the United States has used a range of diplomatic tools to against Iran. Working with other members of the international community, through such multilateral institutions as the Nuclear Suppliers Group and the Australia Group, the United States has attempted to limit Iran's access to the technology and materials it needs to develop NBC weapons. In addition, the United States has conducted aggressive bilateral diplomacy aimed at countries still providing support for the Iranians.

These efforts have been remarkably successful. While some countries continue to do business with Iran in the NBC arena (including Russia and China), most countries have come to accept that efforts need to be made to constrain Iranian NBC activities. Thus, Iran has only limited access to the foreign suppliers that it needs to support its activities.

#### **Rollback**

The ultimate objective of any nonproliferation program aimed at Iran should be ensuring the termination of its NBC and missile programs. This is not an easy task, but it is not impossible. This is evident from examining the track record of the international community in tackling nuclear proliferation.

#### *Conditions for success*

Nearly five years ago, Joseph Yager of SAIC conducted an interesting study of what he called "nuclear rollback," which he defined as a "voluntary and credible renunciation of efforts to move closer to a nuclear weapons capability."<sup>10</sup> According to Yager's study, twenty countries have made serious attempts to acquire nuclear weapons capabilities. This total includes the five declared nuclear weapons states, five additional countries deemed current "proliferation problem cases" (India, Israel, Libya, Pakistan, and North Korea), four countries that abandoned programs due to military defeat or revolution (Germany, Iran, Iraq, and Japan) and six cases of rollback (Argentina, Brazil, South Africa, South Korea, Sweden, and Taiwan). In his study, Yager focused on four of the rollback countries, treating South Korea and Taiwan as special cases due to the leverage exercised by the United States over their national security. Note that Yager treated both Iran and Iraq as solved problems, a view that was perhaps excessively optimistic based on our current knowledge of the two countries.

Based on his study, Yager concluded that his four cases of rollback shared five conditions essential for rollback. First, in each case the leadership of the country reassessed the military utility of nuclear weapons. Second, favorable domestic political developments enabled the leadership to abandon weapons development programs. Third, external pressures and inducements played a role in the decisions to rollback. Fourth, none of the countries openly acknowledged an interest in acquiring nuclear weapons. Finally, all the countries faced economic constraints that limited their pursuit of nuclear weapons.

Several interesting conclusions can be drawn from Yager's analysis. First, it is evident that nonproliferation activities do not defeat nuclear weapons programs. Rather, they serve primarily to delay the completion of nuclear programs and to raise the costs of public declarations favoring acquisition of nuclear weapons. Second, the domestic political context is critical in the termination of programs. Rollback can occur only if those individuals or groups favoring renunciation have the desire and the political power to enforce such action. Finally, the international context is critical in the evaluation of the military utility of nuclear weapons.

I would argue, however, that there are several other factors significant in the decision to abandon nuclear weapons programs that are of significance to countries like Iran. Yager chose to ignore five countries (Germany, Iraq, Japan, South Korea, and Taiwan) that I believe provide an important insight into decisions regarding nuclear weapons. Consider the three defeated countries, Germany, Iraq and Japan. While it is true that military defeat led to immediate termination of nuclear weap-

<sup>10</sup>This analysis is based on data provided by Joseph A. Yager, *Prospects for Nuclear Proliferation Rollback, Discussion Paper*, McLean, Virginia, Science Applications International Corporation, July 2. See also Joseph A. Yager, *Prospects for Nuclear Proliferation Rollback, Seminar Report*, McLean Virginia, Science Applications International Corporation, August 14, 1992.

ons programs, that is not a complete explanation. The Germans and the Japanese have had ample opportunities to review their non-nuclear posture, and both have decided not to pursue nuclear weapons programs. This, I believe, reflects an accurate calculation that the benefits of acquisition are far outweighed by the costs. In particular, the special importance that they assigned to their security relationship with the United States and the Western countries, as well as the anticipated reaction of other countries made nuclear weapons both undesirable and counter-productive. This is significant in the context of Iraq, also a defeated country but one that appears reluctant to abandon its ability to pursue NBC and missile programs. This suggests that when a leadership believes that it needs such capabilities, military defeat is not a sufficient condition to cause abandonment of the efforts.

It appears that these same considerations were significant in the case of South Korea and Taiwan. While it is true that the United States had extraordinary leverage over these two countries, this leverage resulted largely from the import role that the United States played in ensuring the security of those two countries. Thus, I would argue that essentially the same conditions that applied to Yager's four cases of rollback also are pertinent in other examples.

Whether these conclusions also apply to chemical and biological weapons programs is less certain. There has been no effort made to study rollback in the chemical and biological arena, although it is known that some countries have abandoned their programs (Germany and Japan had programs during the Second World War; the United States, Britain, and Canada abandoned their programs when they adhered to the BTWC). The context also is decidedly different. There is a treaty that bans possession of biological weapons (the 1972 Biological and Toxin Weapons Convention), and there will soon be a similar treaty for chemical weapons (the Chemical Weapons Convention, scheduled to enter into force this year). In contrast, possession of nuclear weapons is not generally proscribed, except for those countries adhering to the Nuclear Non-Proliferation Treaty (and even it permits a country to withdraw from the treaty).

From these additional observations, I would draw an additional conclusion: that NBC programs can be terminated only with willing agreement. There is no military solution to NBC programs. Despite unfavorable conditions, a country will pursue NBC capabilities if they appear sufficiently important.

#### *Applying the criteria to Iran*

It appears that three of the five criteria identified by Yager apply to Iran, but that two do not.

The Iranians have never officially acknowledged an interest in possessing NBC weapons. Despite some rather direct statements made by Iranian officials about the value of NBC weapons, Iran cannot afford to officially acknowledge such intentions. As a signatory to the NPT, BTWC, and the CWC, Iran cannot adopt any other position without undermining efforts to acquire NBC weapons. This is most clearly evident in the case of nuclear weapons since, if Iran stated that its ultimate aim was acquisition of nuclear weapons, then China and Russia, both signatories to the NPT, would be forced to terminate their nuclear assistance programs. Finally, Iran is faced by severe economic constraints that limit its ability to pursue NBC programs.

While it is clear that three of Yager's factors appear positive for rollback in the Iranian case, the other two factors are decidedly negative. There is no reason to believe that Iran will decide that it has no military rationale for its NBC capabilities, and there is little reason to believe that the existing clerical regime will be inclined to take steps to terminate these programs.

Accordingly, I would argue that two conditions are essential to an Iranian decision to terminate its NBC programs. First, a regime must come to power that can establish better ties to other countries in the region. Specifically, the regime must be able to reconcile major differences with the United States and with the GCC and other significant Arab states. Second, the regime must be willing and able to enter into regional security arrangements that accomplish many of the same objectives as the NBC programs.

Yet, it is also true that the United States lacked leverage in many of the cases where successes ultimately emerged. Crucial to the ultimate success was persistence, ensuring that when the opportunity arose we were positioned to pursue non-proliferation objectives. Thus, the true objective is delay by preventing a country from acquiring capabilities through raising costs.

#### *U.S. military pressure on Iran*

Note that threats of military response to Iranian NBC activities can have either negative or positive consequences, depending on the reaction in Tehran. The prospect that the United States might attack Iran increases its sense of threat, and thus

potentially makes NBC capabilities more useful as a deterrent. At the same time, to the extent that a small NBC capability increases prospects for a preemptive attack, Iran's overall security is reduced.

From this perspective, the United States could pursue radically different policies in the context of its broader approach towards Iran. For example, if we believed that Iran was motivated to pursue NBC capabilities because of the threat of U.S. military action, then we could pursue a conciliatory policy intended to reduce Iran's sense of threat from the United States, and to make it believe that it can cope with regional threats using its own resources.

If, however, we believe that it has additional motivations to pursue NBC capabilities, then a conciliatory approach might do little to reduce the motivations to acquire such capabilities. This suggests that NBC issues should not drive U.S. policy, but should be integrated into the foreign policy objectives that the United States adopts towards Iran.

#### **Bottom Line**

In conclusion, I would advance several observations about Iran's NBC programs.

First, the United States has been remarkably successful in constraining Iranian capabilities. While we have not stopped Iran from pursuing development NBC weapons and missile delivery systems, the capabilities that Iran has acquired so far are remarkably rudimentary, and the time line for major successes appears lengthy.

Second, the real threat these capabilities pose is to the security of our friends and allies in the region. These countries, and especially the GCC countries, must believe that the United States will protect them from Iran. This also means convincing them that the United States will not provoke the Iranians. So long as they have confidence in the United States, I believe that they have strong incentives not to be coerced by Iran.

Third, we need to continue to pursue a strategy that mixes multilateral and bilateral approaches. This is not a problem that can be solved by unilateral U.S. action. We need the full support of like minded governments around the world.

Finally, the problem is not uniquely tied to the current regime. A fundamental shift in Iranian policy might facilitate rollback efforts, but it is also possible that a new regime might pursue the same policies. Moreover, while the United States might be willing to accept a pro-Western regime in control of existing Iran's NBC programs, it is unlikely that other countries in the region would feel similarly. Hence, the problem is likely to outlast the current regime.

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### **Statement Submitted by Senator John Ashcroft**

Mr. Chairman, I greatly appreciate you holding this hearing on weapons proliferation to Iran. This is certainly a subject of utmost importance for America's national security. We live in a complex world today where threats to our national security are not easily identified. We cannot afford to take for granted the victories we have won; we have advanced freedom's cause and increased international stability throughout the world. In this dawn of a new era, rising security threats dot the horizon and must be addressed.

The proliferation of weapons of mass destruction is one of the greatest national security threats we face in the post-Cold War world. While weapons proliferation is a problem that involves numerous nations around the globe, I am most troubled by Iran's efforts to acquire these weapons. Iran is the worst state sponsor of terrorism in the world, violently opposes the Middle East peace process, and poses a constant threat to regional stability in the Persian Gulf.

Mr. Chairman, it may seem obvious to you and I that the strongest measures are needed to isolate such regimes, but President Clinton continues to overlook these arms transfers and refuses to impose sanctions required by US law on the foreign governments who proliferate these weapons.

While Iran has received weapons and weapons technology from numerous states, let me focus on the sordid tale of China's involvement in the Iranian arms sector. China is arguably Iran's leading supplier of weapons of mass destruction technology and the missiles required to deliver such weapons to distant targets. China has apparently had a secret nuclear cooperation agreement with Iran since 1985, has trained Iranian nuclear engineers, and has built a calutron system for uranium enrichment in Iran similar to the system used by Iraq to develop its nuclear program. China is also interested in building two 300-Megawatt reactors in Iran in the next ten years. China hides behind the cloak of the Nuclear Nonproliferation Treaty

which permits peaceful nuclear transfers, but there is no doubt that Iran is diverting this nuclear technology for military uses.

China has also been deeply involved in Iran's chemical weapons program. In commenting on Chinese chemical weapons assistance to Iran, Deputy Assistant Secretary of Defense Bruce Reidel testified in November, 1995 that "Chinese firms have provided some assistance, both in terms of the infrastructure for building chemical plants and some of the precursors for developing agents." The assistance continued in 1996 as China reportedly transferred mixing vessels and an air filtration system for producing chemical weapons.

As if the transfer of weapons of mass destruction technology to Iran were not enough, China has also given Iran the missiles needed to deliver these weapons to distant targets. China has transferred missile guidance systems, advanced machine tools for the manufacture of missiles, and complete missile systems to Iran. One of these missile systems, the C-802, has a range which places 15,000 US soldiers at risk in the Persian Gulf. Vice Admiral John Redd, Commander of the US Fifth Fleet, has repeatedly expressed concern over the destabilizing effect of these missiles in the hands of Iran.

Chinese involvement in Iran's arms program violates the Nuclear Nonproliferation Treaty and China's commitment to abide by the Missile Technology Control Regime. I have come to expect this behavior from Beijing—dictators will be dictators. But what can be said of the President's silence? In spite of all the evidence that China is assisting the weapons program of the terrorist state of Iran, President Clinton has refused to impose sanctions on China for the weapons transfers. I see a disturbing trend in President Clinton's efforts to confront these nations which threaten our national security. In addition to an abysmal performance in enforcing US laws against the proliferation of weapons of mass destruction, President Clinton has eviscerated provisions in the US Anti-terrorism Act of 1996 designed to prohibit financial transactions with state sponsors of terrorism. President Clinton claimed in an August, 1996 speech at George Washington University that business as usual cannot proceed with terrorist states, but issued regulations for the Anti-terrorism Act that same month which allowed financial dealings to continue with terrorist states like Sudan. Sudan has joined Iran as the worst of state sponsors of terrorism, and I can assure you we will be exploring the President's antiterrorism policy in the Africa Subcommittee.

Mr. Chairman, I am an original co-sponsor of a Senate Resolution introduced this week urging President Clinton to enforce our laws to prevent weapons proliferation to Iran. It is unfortunate that the Senate is having to confront the President of the United States about getting tough on rogue states like Iran and the communist dictators in China. I applaud your efforts in bringing this critical issue to light and hope that the attention will result in a positive change in U.S. policy.